

2012 EU ALSA Training

F1A75, A55 Series

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Confidential

GRMA

Brain_HUNG

ASUS
Inspiring Innovation - Persistent Perfection

F1A75&A55 Series – Agenda

- AMD Fusion Platform Structure
- Critical Power Flow
- Clock Distribution
- Power Sequence
- Repairing Experience Sharing (00)
- Repairing Experience Sharing (all dots)
- Fusion Platform Complement

F1A75&A55 Series – Agenda

- **AMD Fusion Platform Structure**

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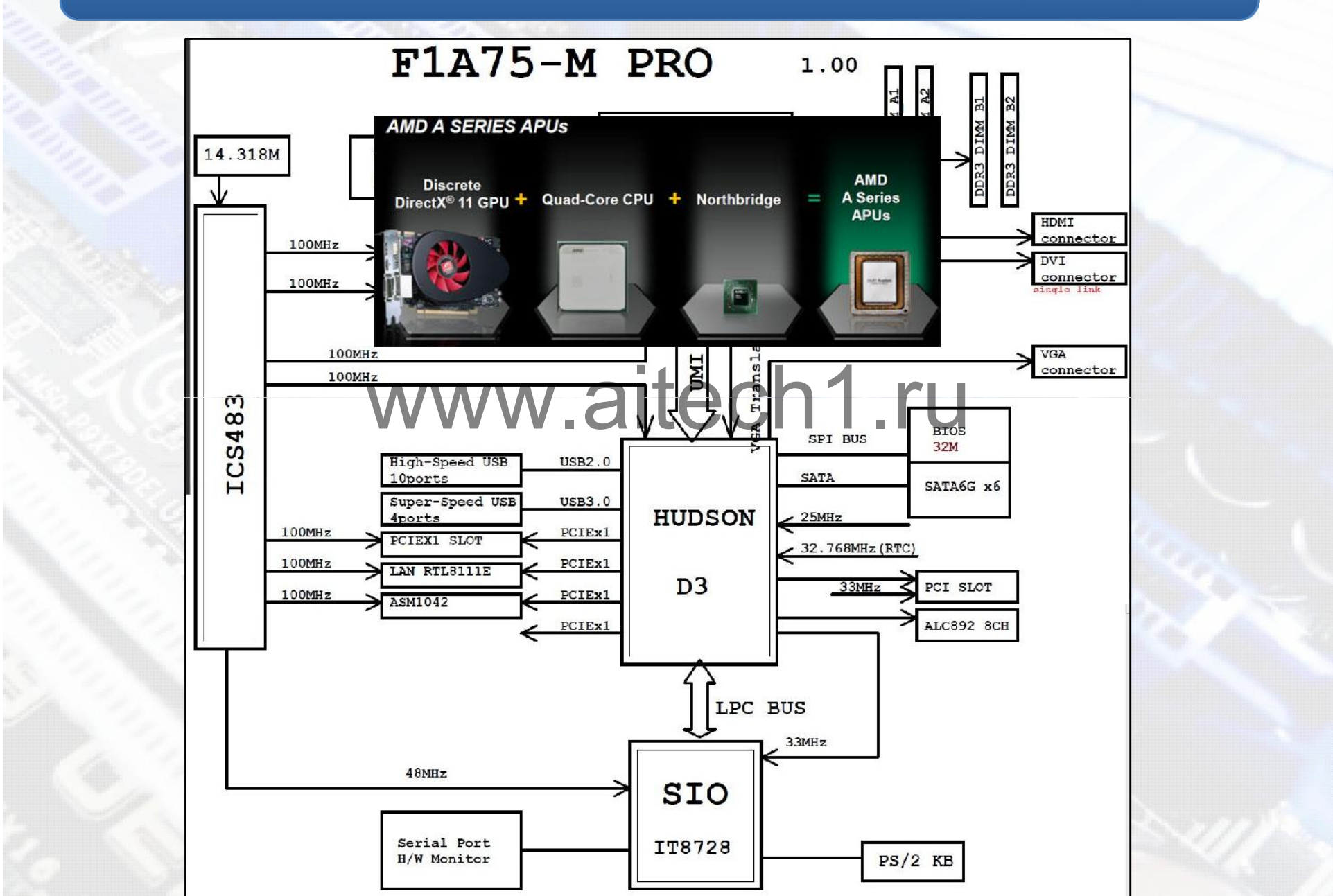
- Repairing Experience Sharing (00)

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AMD Fusion Platform Structure



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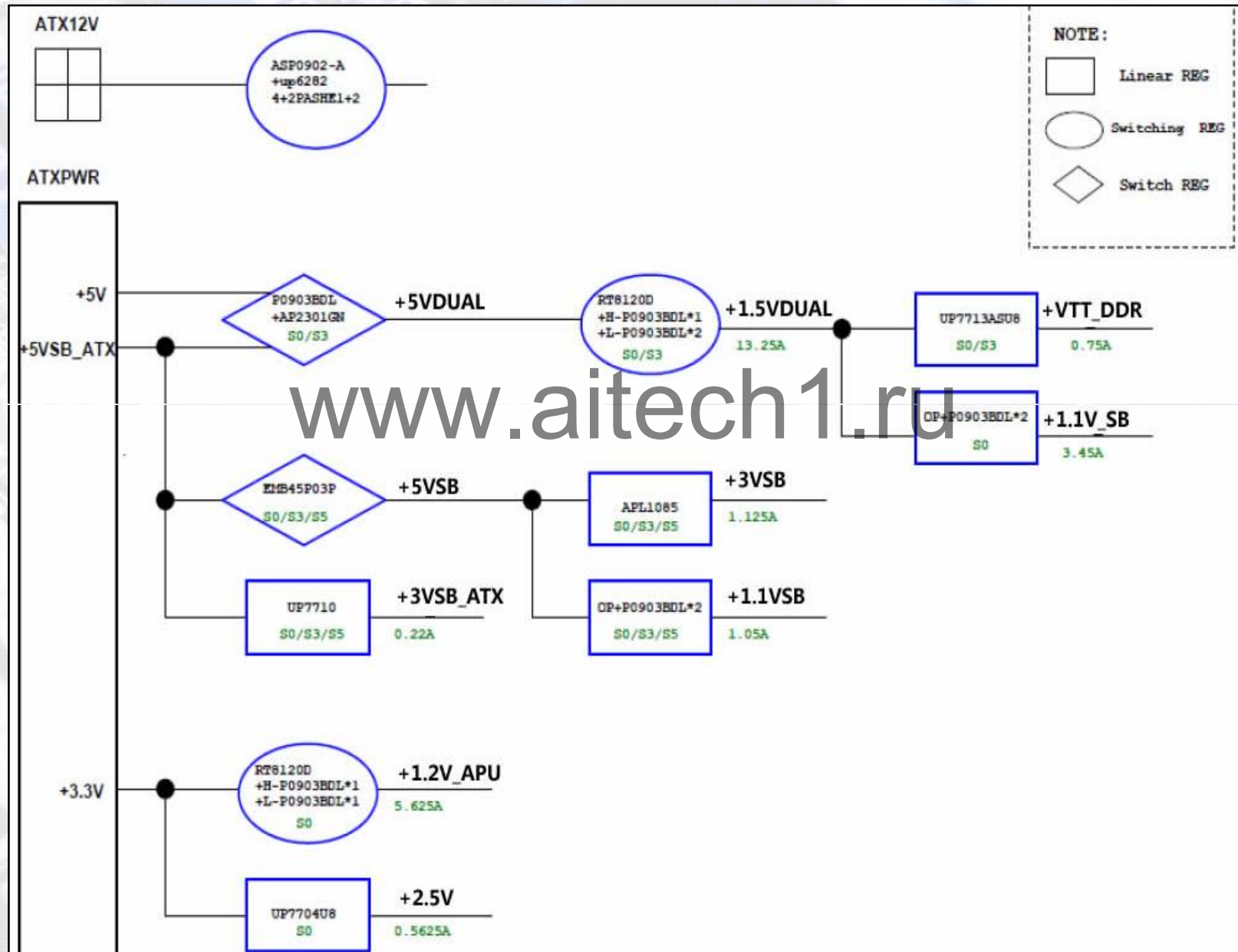
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F1A75&A55 Power Flow

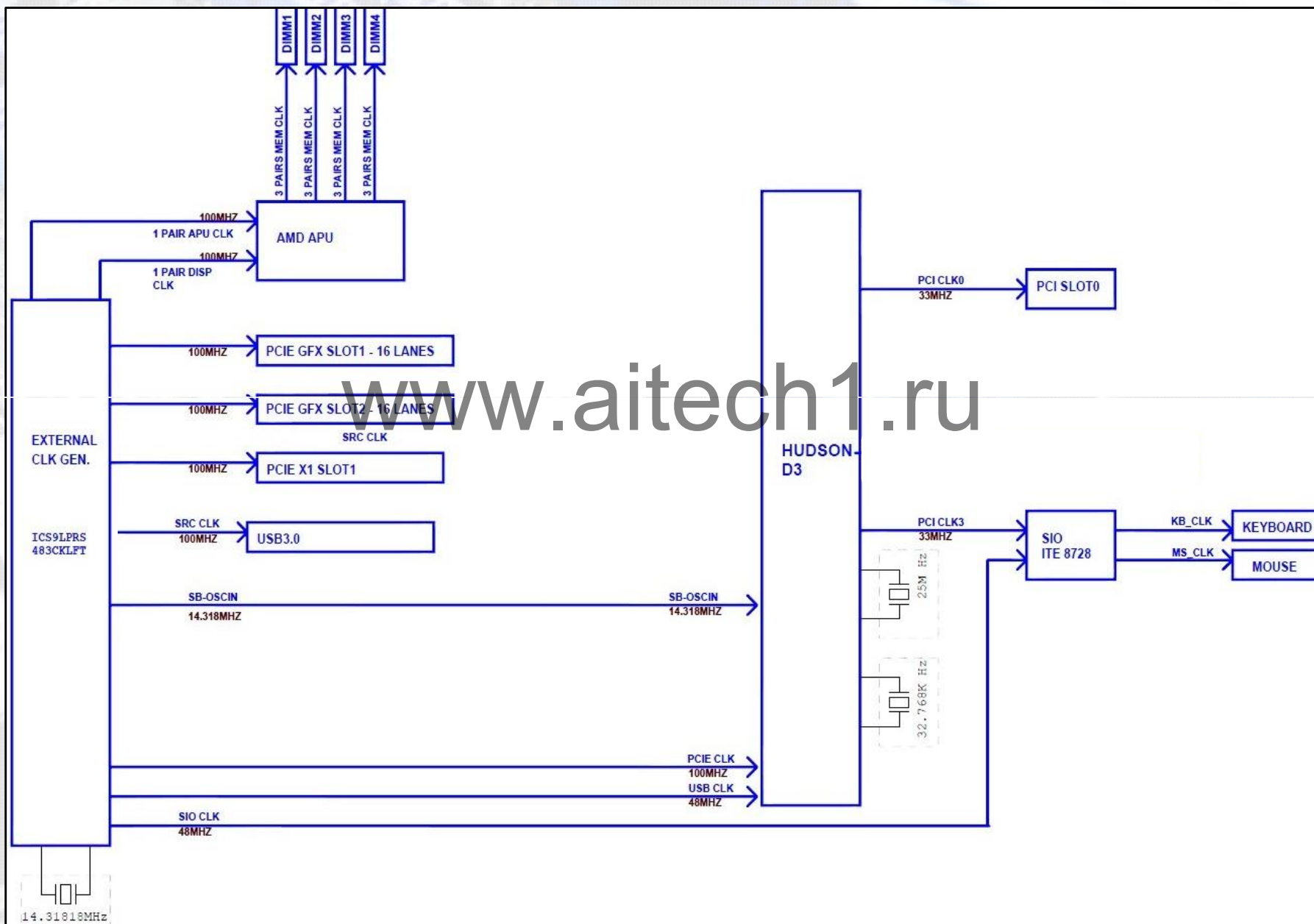


F1A75&A55 Series – Agenda

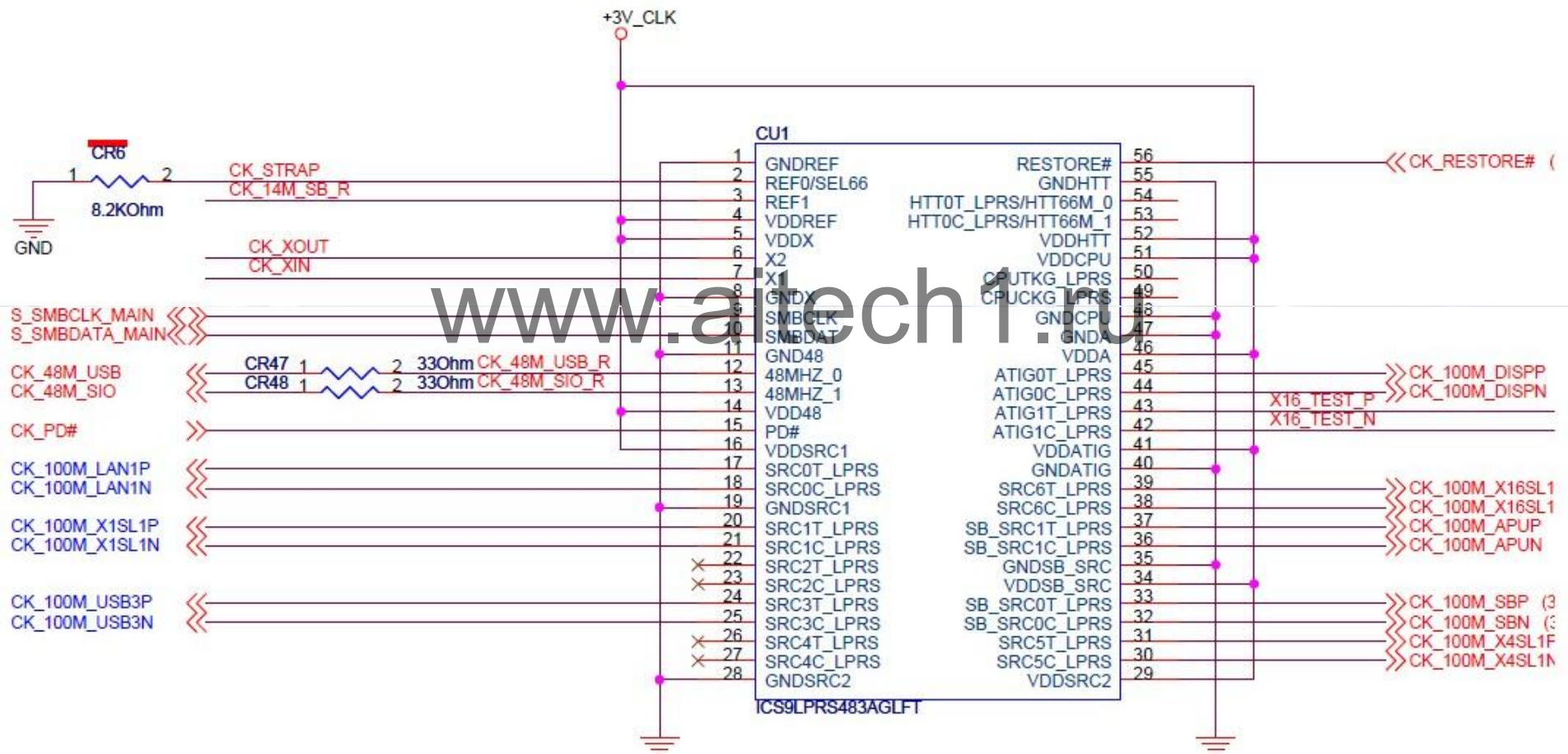
- AMD Fusion Platform Structure
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Frequency Distribution (F1A75-M)



Frequency Distribution (F1A75-M)



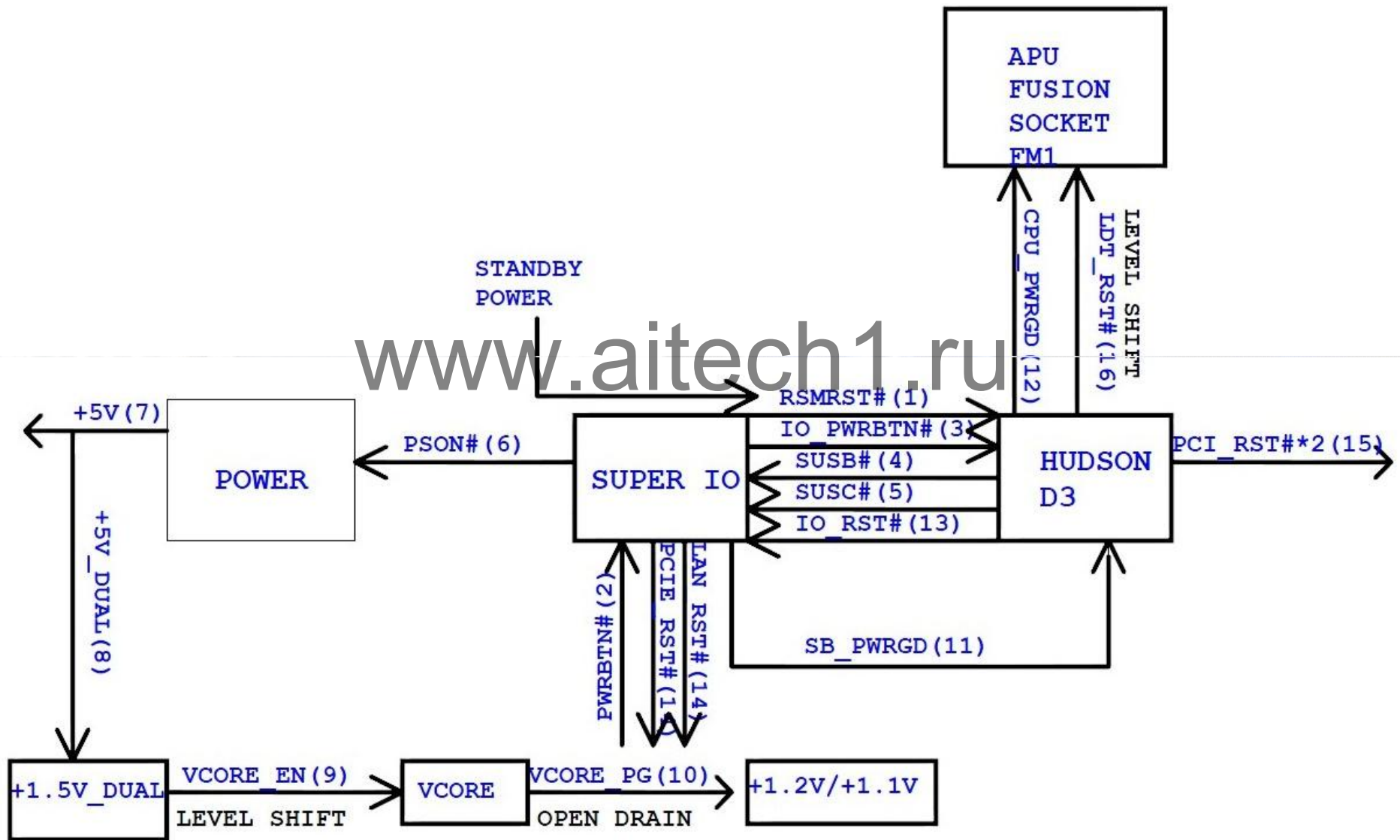
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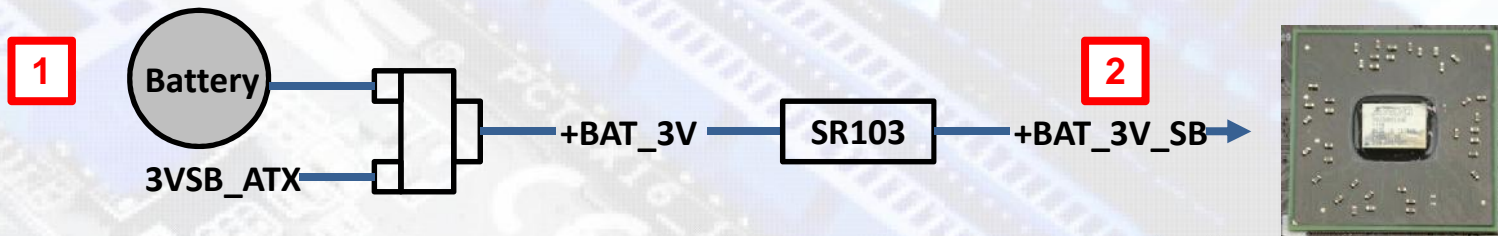
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- Fusion Platform Complement

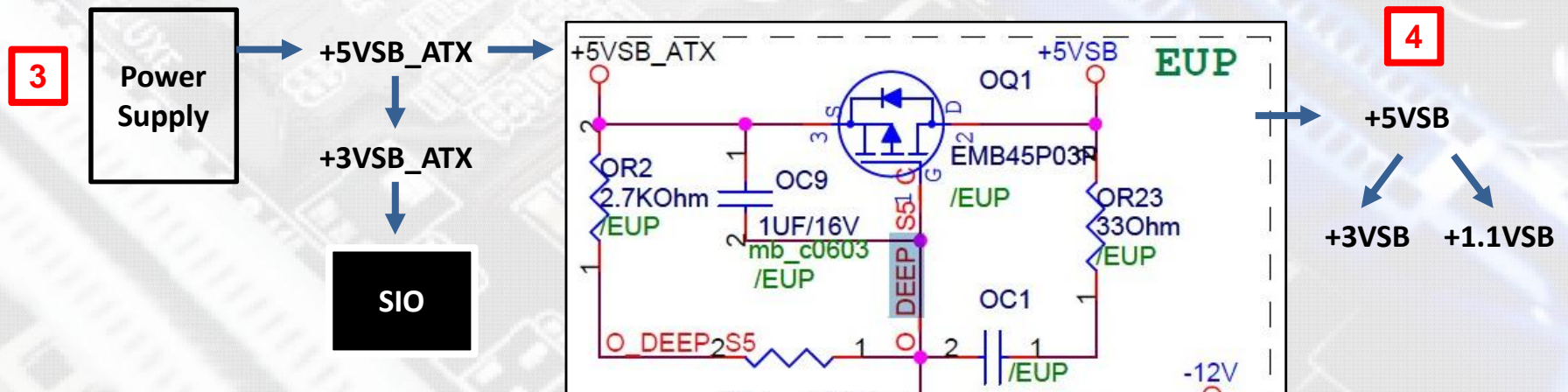
Power Sequence



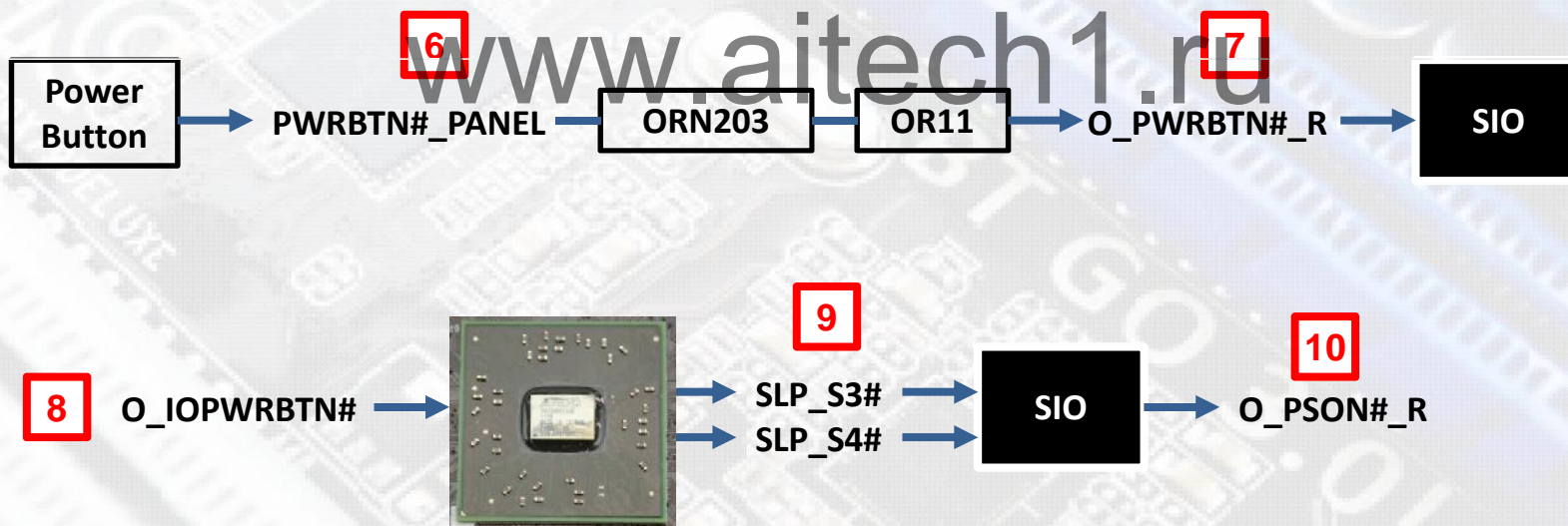
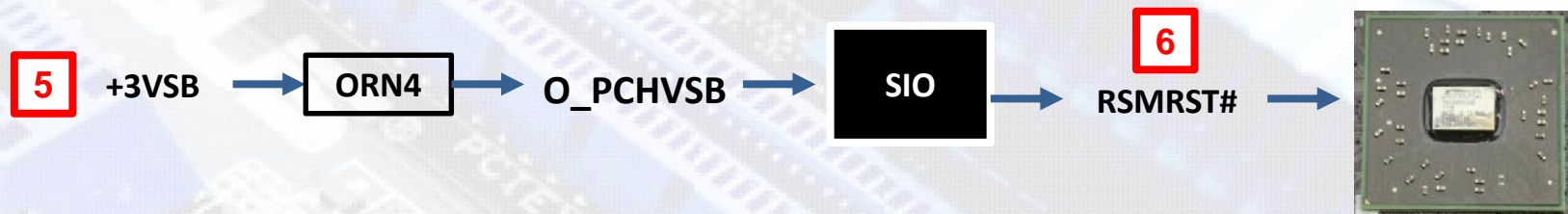
Power Sequence (F1A75-M)



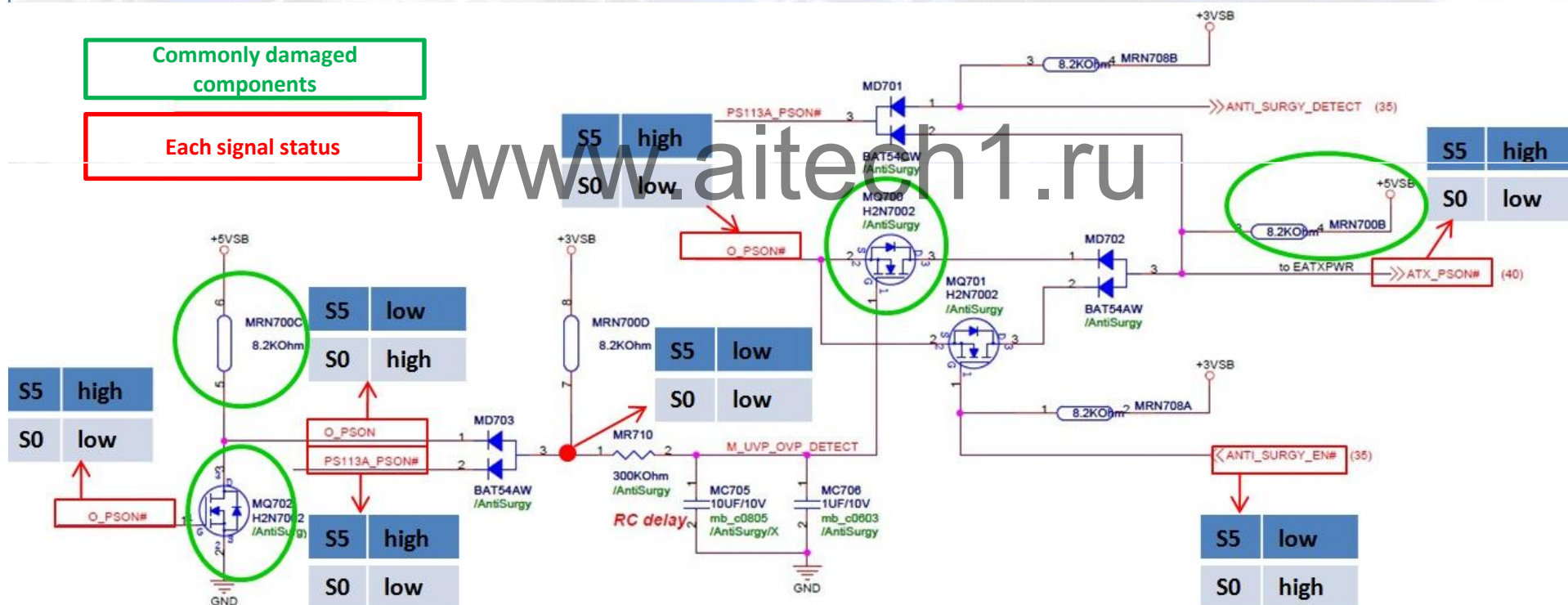
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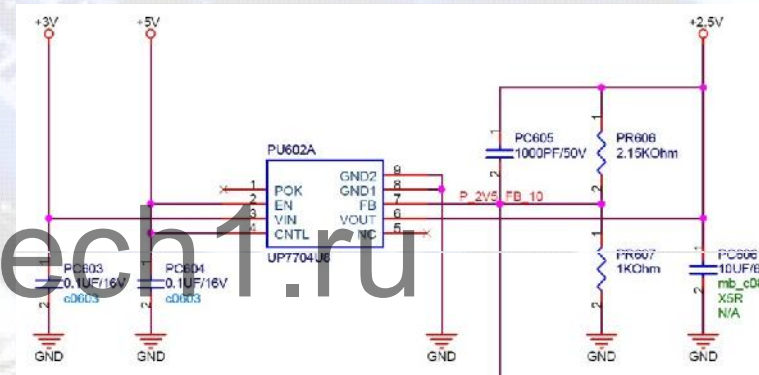
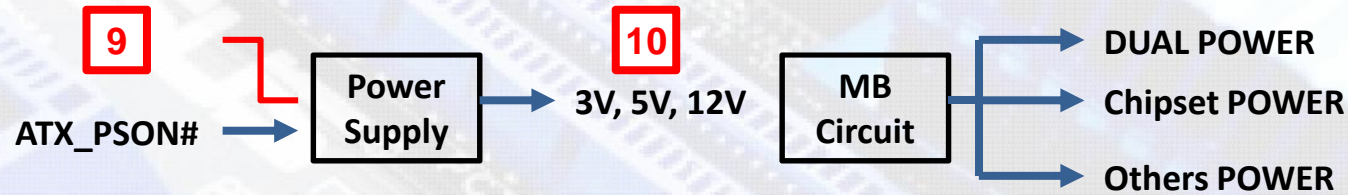
Power Sequence (F1A75-M)



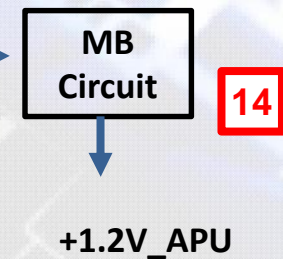
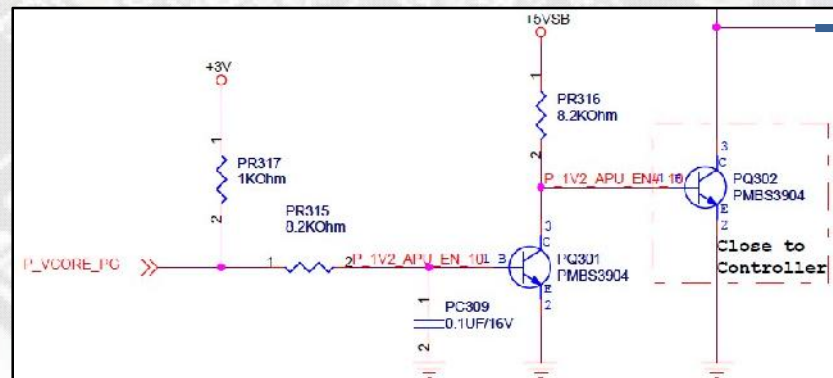
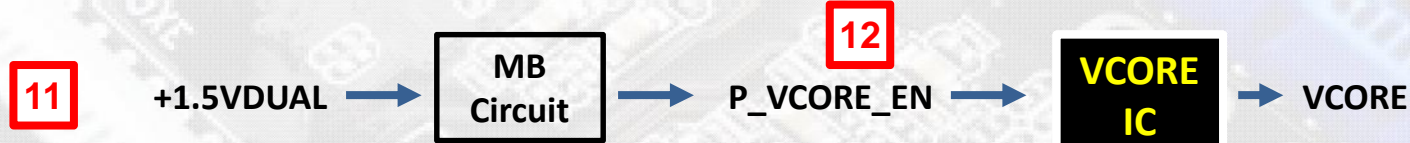
Power Sequence (F1A75-M)



Power Sequence (F1A75-M)

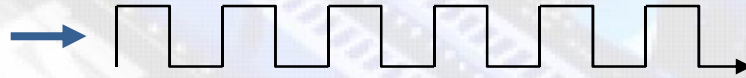


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Power Sequence (F1A75-M)

After PS0N#

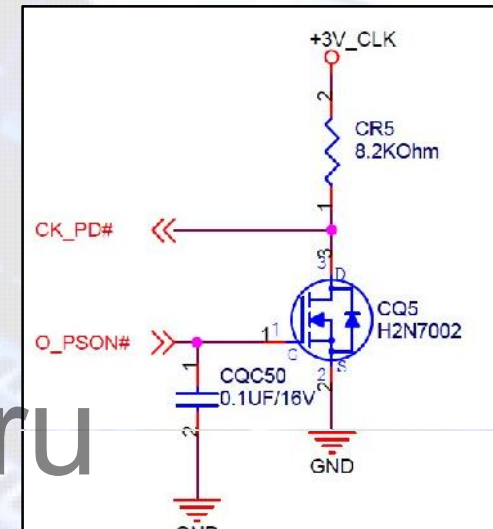


15

SIO

O_PWROK_SB

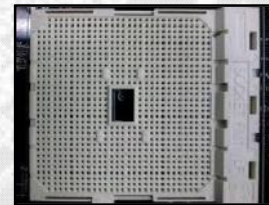
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16



S_APU_PWROK



17

SVID

VCORE IC

18



S_A_RST#_R

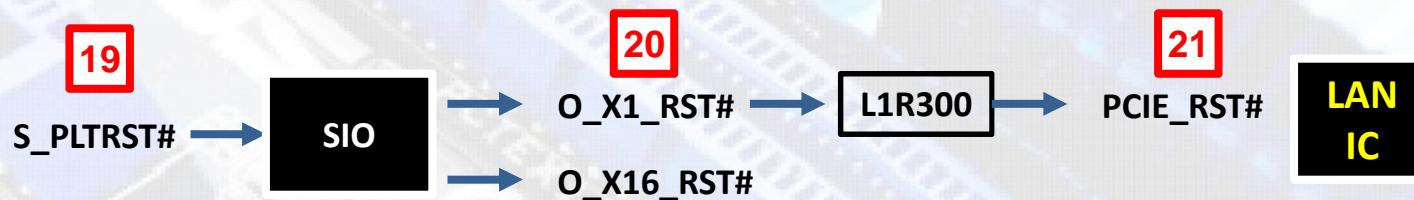
SR2

19

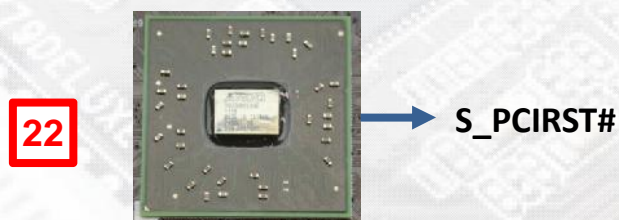
S_PLTRST#

SIO

Power Sequence (F1A75-M)



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- **Repairing Experience Sharing (00)**
- Repairing Experience Sharing (all dots)
- Fusion Platform Complement

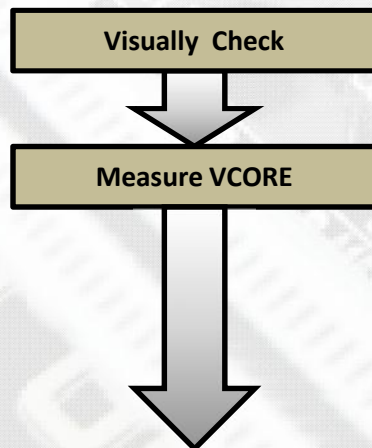
Repairing Experience Sharing (00)

◆ F1A55-M LE: 00

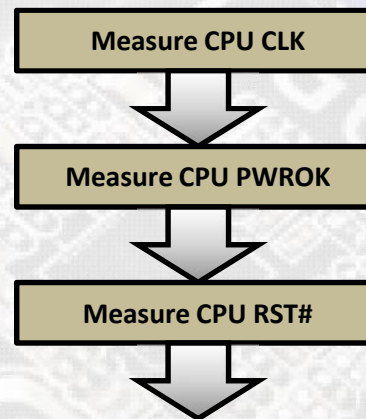
MB Type	L1 Problem Description	Needed materials situation	L2 Problem Description	Signal	Position Number
F1A55-M LE	00	SU1			

The Initial Problem Analysis:

- 1 : Visually check MB slot for damage. Check front and back of the board for line breaks.
- 2: Check SX1 if it has 32.768KHZ,POU601 PIN:2 3VSB,OU2 PIN:4 3VSB_ATX °
- 3: After plugging in power supply and power on, the debug card shows 00



- 1.+1.5V_DUAL PL511 PIN2
- 2.VCORE 1.1V PL141 PIN2
- 3.VDDNB 1.1V PL221 PIN2
- 4.+1.2V_APU PL311 PIN1
- 5.+2.5V_VDDA HR19 PIN2



- 1.CK_100M_APUN,CK_100M_APUP
- 2.CK_100M_DISPP, CK_100M_DISP

S_APU_PWROK 1.5V HQ2 PIN3

S_APU_RST# 1.5V , SU3 PIN1
(Trigger RSTCON# and S_APU_RST#
can be reset)
All CPU condition are all normal so it
can consider as "00"

Repairing Experience Sharing (00)

BIOS Check

Measure HUDSON-D3
Voltage

- 1.+3VSB
- 2.+3V SL4 PIN1
- 3.+3V_BAT_SB SC18 PIN1
- 4.+1.1VSB PQ902 PIN3
- 5.+1.1V_SB
- 6.S_1.1VSB_PLL_CLK SL5 PIN
- 7.+1.1VSB_USB3 SL9 PIN2
- 8.S_3V_PLL_CLK SL4 PIN2
- 9.S_3V_PLL_PCIE SL1 PIN2
- 10.S_3V_PLL_SATA SL2 PIN2
- 11.S_3V_PLL_VGA SL10 PIN2
- 12.S_3VSB_PLL_USB SL6 PIN2
- 11.S_3VSB_PLL_USB3 SL12 PIN2

Measure HUDSON-D3
Frequency

- 1.25MHz SX2
- 2.S_CK_14M_SB SR37 PIN2
- 3.CK_100M_SBP,
CK_100M_SBN SC22,SC23 PIN1
- 4.CK_48M_USB SC27 PIN1

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- **Repairing Experience Sharing (all dots)**
- Fusion Platform Complement

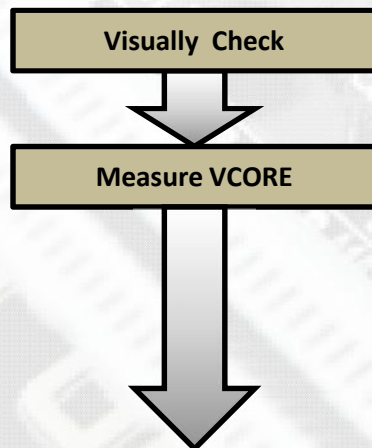
Repairing Experience Sharing (all dots)

◆ F1A55-M LE: ALL DOTS

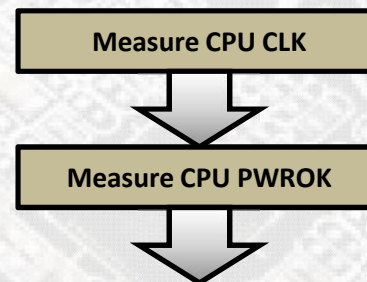
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F1A55-M LE	All dots			S_APU_PWROK	HRN3

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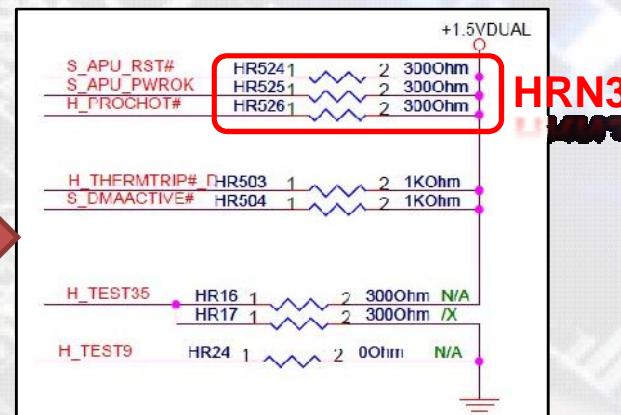
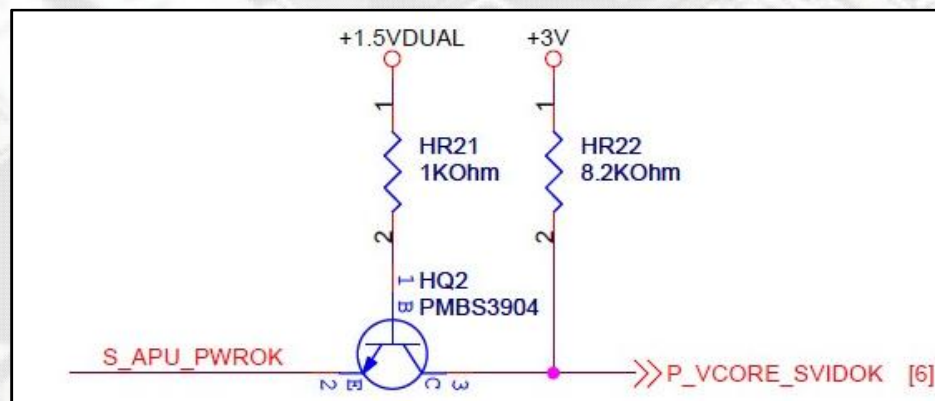
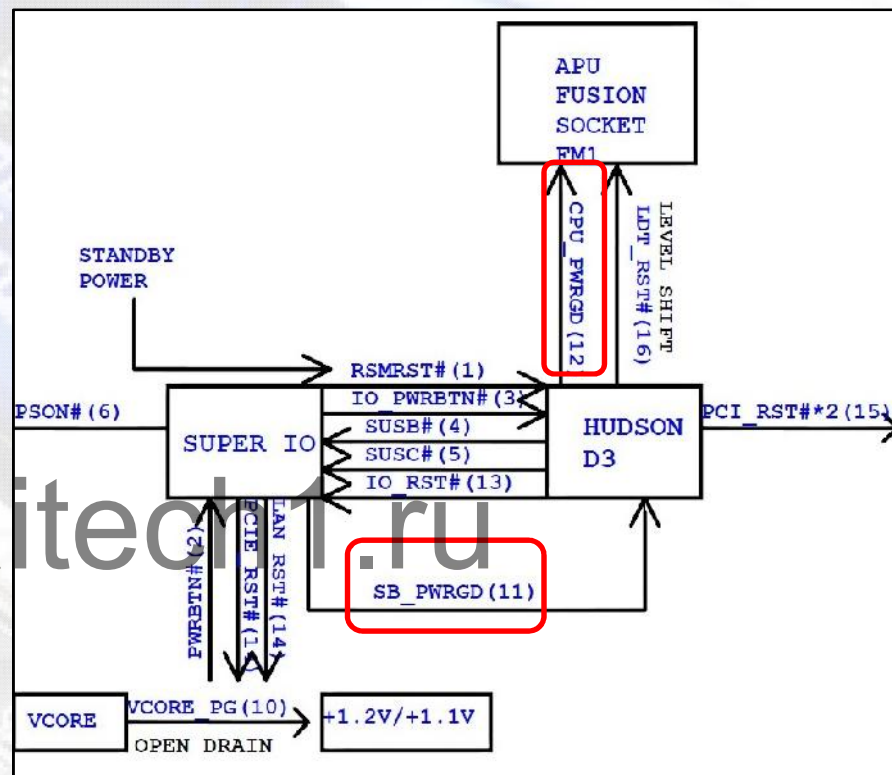
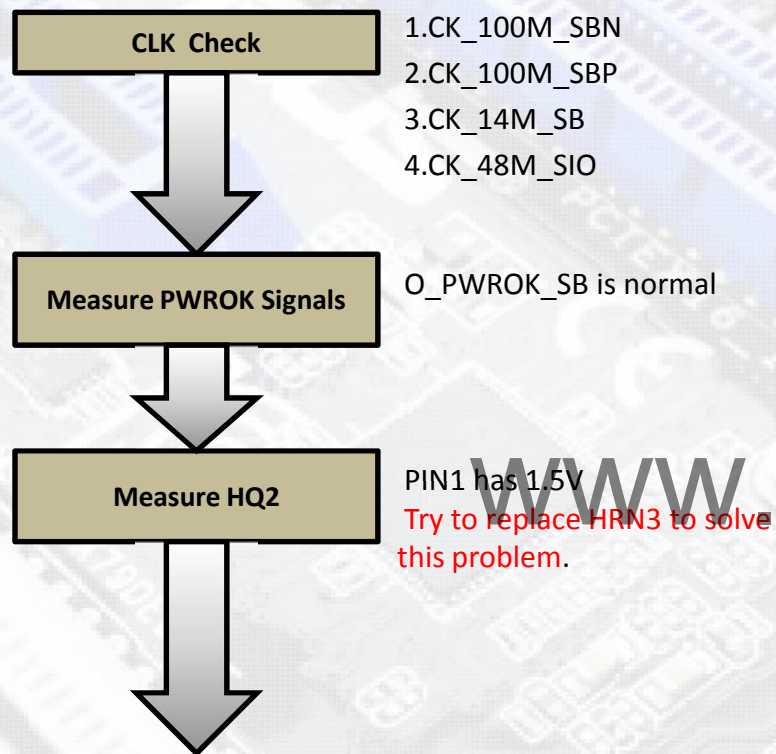
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- 1.CK_100M_APUN,CK_100M_APUP
- 2.CK_100M_DISPP, CK_100M_DISP

S_APU_PWROK 1.5V HQ2 PIN3 has no power

Repairing Experience Sharing (all dots)



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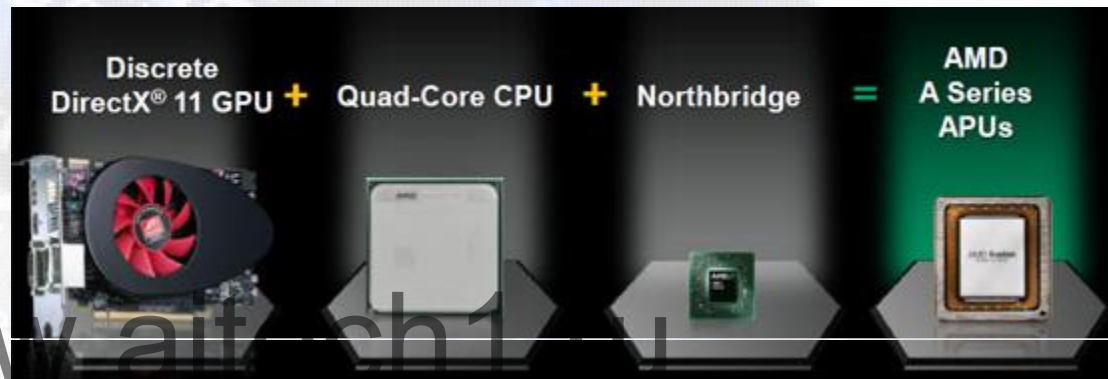
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- **Fusion Platform Complement**

AMD Fusion Complement

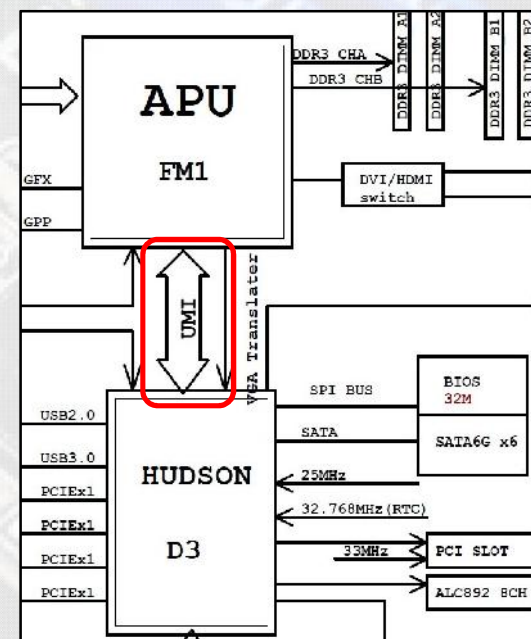
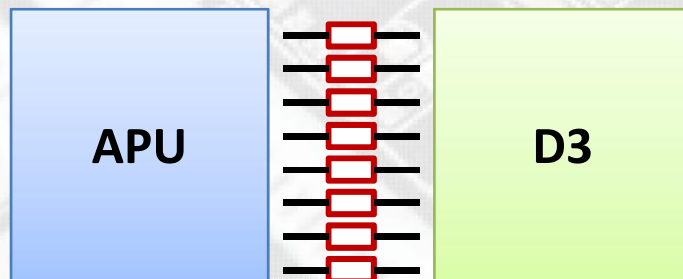
“APU” (short for Accelerated Processing Unit) technology.

The short version of this is that AMD basically mashed together a high performance CPU and a high performance GPU into one tiny, fast, energy sipping chip.



UMI: Unified Media Interface

In FM1 structure, it's for communication bus between D3 and APU.



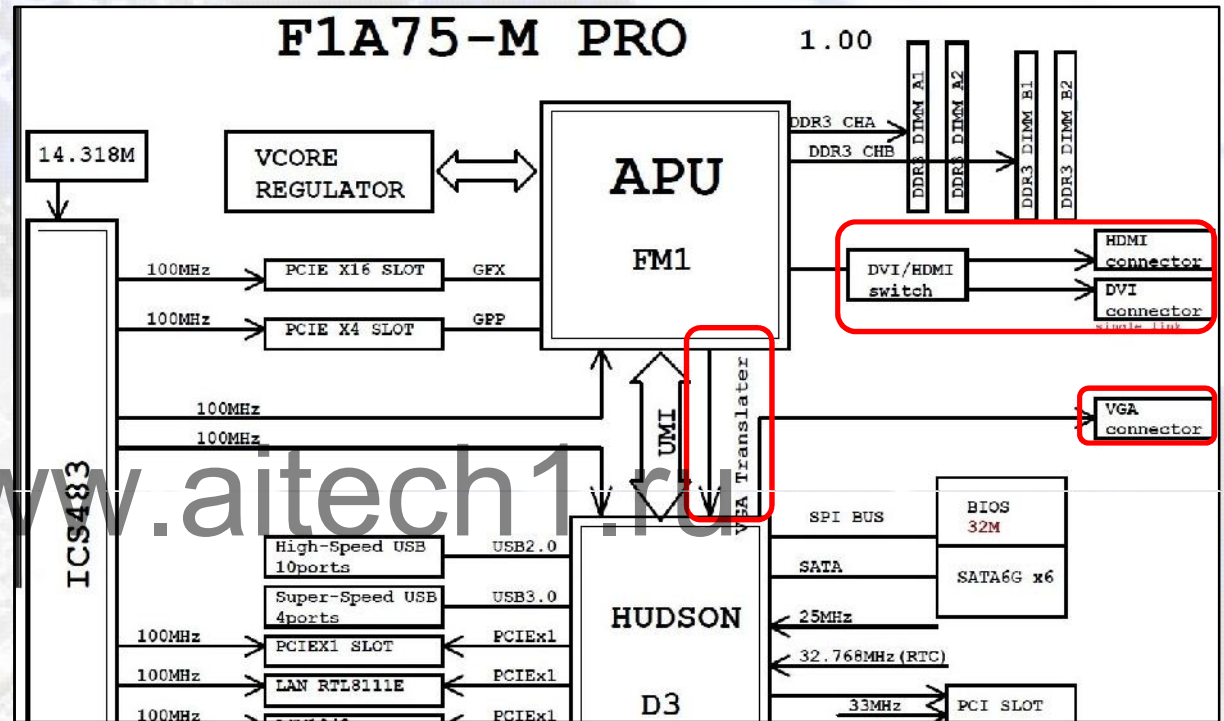
AMD Fusion Platform Structure

A. DVI Interface (Digital):

Connected with CPU and controlled by CPU directly.

A. VGA Interface (Analog):

Connected with SB and through “VGA Translator Bus” to communicate with CPU and controlled by CPU.



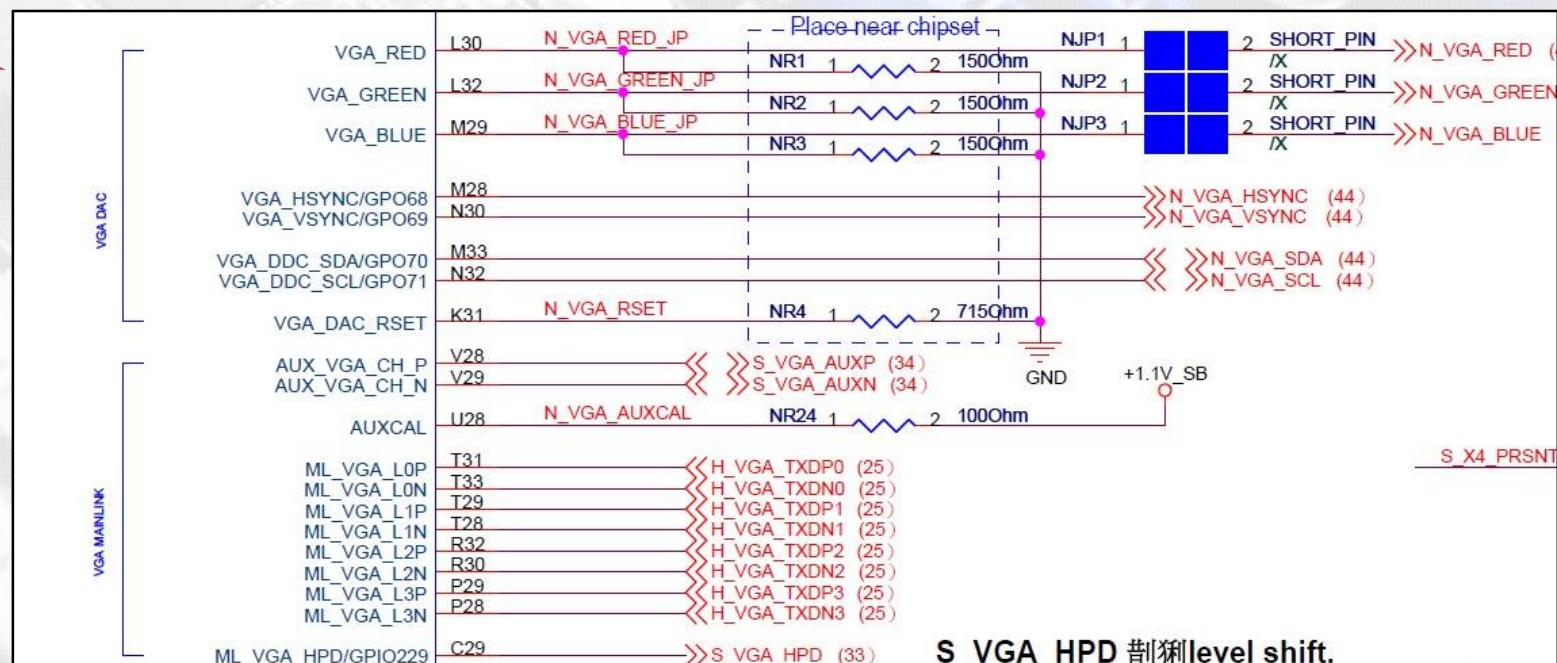
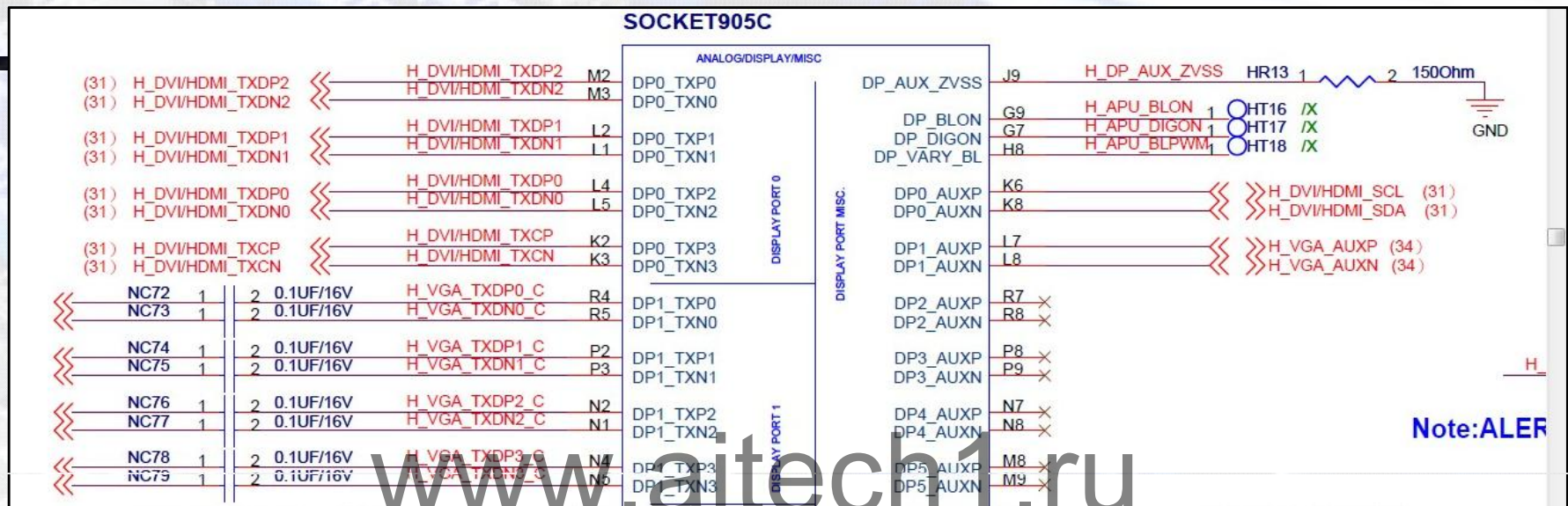
H_VGA_TXN[0:3], H_VGA_TXP[0:3] connected with SB side, the ground impedance is 942 ;

H_VGA_TXN_C[0:3], H_VGA_TXP_C[0:3] connected with CPU side

S_VGA_AUXN, connected with SB side, the ground impedance is 552

S_VGA_HPD the ground impedance is 816 °

AMD For DVI/HDMI & VGA





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Thank You!