FAQ0139

Frequently Asked Questions

AT32F407/437 gets stuck at EMAC DMA software reset

Question:

The application will get stuck at “while(emac_dma_software_reset_get() == SET)” after AT32F407/437 MCU calls the function “emac_dma_software_reset_set();” during EMAC port initialization.

How to identify and handle this problem?

Answer:

1. **Why is the program stuck at “while(emac_dma_software_reset_get() == SET)”?**

   After the function “emac_dma_software_reset_set();” is called by software, the MCU controller will reset all logic circuits when it is clocked. If there is no available PHY clock for the controller at this moment, the program will be stuck here.

2. **How to check and handle this stuck issue?**

   In MII mode, the absence of TXCLK and RXCLK will cause the program to be stuck.

   How to judge whether TXCLK and RXCLK are working normal?

   - First check if TXCLK and RXCLK are connected well.
   - Then check if the clock to Ethernet PHY works well, as TXCLK and RXCLK are provided to EMAC by Ethernet PHY. As a result, if the clock that is provided to Ethernet PHY failed, so does TXCLK and RXCLK.

   In RMII mode, if there is no REF_CLK cock, the program will also be stuck.

   Check if REF_CLK clock error is detected.

   - First check if REF_CLK is connected well.
   - Then check if there is a clock available on the REF_CLK line, and if the clock provided to Ethernet PHY is abnormal.

Type: MCU application
Applicable products: AT32F407/437
Main function: EMAC
Other function: None

Document revision history

Date	Revision	Changes
2022.11.16	2.0.0	Initial release

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