APM32F107xE

Errata Sheet

Version: V 2.1

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1 Introduction

This manual mainly introduces the limitations of the APM32F107xE series products during use. If you encounter the application scenarios described in the manual during the use of the product, please use the product according to the solutions provided in the manual; if no solution is provided, please avoid this application scenario.

2 Errata List

Table 1 Errata List

Category	Introduction	Product version
		A1
GPIO	GPIO output	•
System	PWR sleep mode	•
USB/CAN	LS host mode of USB_OTG_FS module	•
	RX communication of CAN2	•
Wake-up in Standby Mode	Operations before entering Standby mode	•

Note: "●" indicates that this errata description is involved in this version; the 'X' indicates that it is not involved in this version.

3 GPIO

3.1 GPIO output

Problem description

When the GPIO port is configured as multiplexing push-pull output, the output voltage may be affected by external interference and is unable to output accurate levels; when configured as floating input to read the external I/O input values, it may be affected by external interference and is unable to read accurate values.

Solutions

When configured as multiplexing push-pull output, connect an external pull-up resistor; when configured as floating input, connect an internal pull-up resistor externally or configure it as a pull-up input.

4 System

4.1 PWR sleep mode

Problem description

The PWR sleep mode_WEF() instruction is invalid and cannot enter the low-power mode.

Solutions

Choose either of the following solutions:

- It can be executed normally after it is reset through the reset pin.
- Set in the download interface of Keil (set the reset and run).
- The second WFE instruction can be executed normally.
- Modify the program, and use 1 WFI rather than WFE.

5 USB/CAN

5.1 LS Host Mode of USB_OTG_FS Module

Problem description

When the USB_OTG_FS module is configured as LS host mode, the eye diagram of the 5m line test is not perfect, the eye diagram of the 1m line test at 3.0V is not perfect, and the test results of both 1m and 5m lines at 2.7V are abnormal.

Solutions

It can be corrected and improved by adjusting the off-chip series resistance. For example, in case of overshoot, increase the resistance, and if the rise and fall time is slow, reduce the resistance. The test shows that, in FS mode, the off-chip resistance is 22 Ω; in LS mode, an off-chip resistance is 16 Ω, and a good eye diagram that can pass the test certification can be obtained.

5.2 RX communication of CAN2

Problem description

After the PB5 pin is remapped to the RX function of CAN2, when it is configured as multiplexing push-pull output, communication is impossible.

Solutions

It is suggested that PB5 should be configured as pull-up input, pull-down input or floating input after it is remapped to the RX function of CAN2.

6 Wake-up in Standby Mode

Problem description

In Standby mode, the system supports multiple wake-up sources. These signals are combined (using a logical OR) before reaching the rising edge detector. When a valid edge is detected, a wake-up flag (WUEFLG) is generated. To ensure the MCU enter and stay in Standby mode, you must clear the WUEFLG flag first; otherwise, it will wake up immediately. Note that if any active wake-up source stays high while clearing the flag (setting the WUFLGCLR bit), the detector's input also stays high. As a result, it cannot detect new level changes, which masks future wake-up events and prevents the MCU from waking up properly.

Solution 1

To prevent this issue, follow these steps before entering Standby mode:

(1) Disable all used wake-up sources.

(2) Clear all related wake-up flags.

(3) Reenable all used wake-up sources.

Solution 2

Keep only one wake-up source before entering Standby mode (for example, turn off the RTC alarm and leave only the PA0 WKUP function on).

7 Revision history

Table2 Document Revision History

Date	Version	Revision History
August 2024	1.0	● Initial release
April 2026	2.1	● Delete Chapter 2: Product Version and Silk Screen Printing Instructions ● Add Chapter 6: Wake-up in Standby Mode

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8. Scope of Application

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