APM32F030x8

Errata Sheet

Version: V2.2

Contents

1 Introduction

This Manual mainly introduces the limitations of the APM32F030x8 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
		B
Clock	HSE serves as the clock source	•
GPIO	BOOT pin	•
	Pin level delay	•
Tool	Burning	•
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 Clock

3.1 HSE serves as the clock source

Problem description

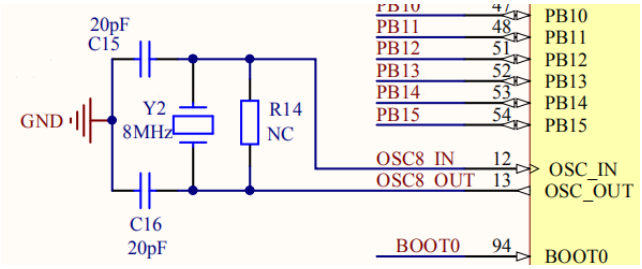
When the timeout value of the software that sets the HSE startup time is too small (e.g. 0x0500), external clock startup ready timeout may occur, which may result in the failure of using HSE as the clock source.

Solutions

To ensure normal startup of the crystal oscillator, it is recommended to modify the external clock wait time timeout value to at least 0x5000.

The macro definition of HSE_STARTUP_TIMEOUT can be modified. The macro definition is in XXX32F0xx.h. The recommended crystal oscillator circuit is shown below (the capacitance value should match the crystal oscillator model)：

Figure 1 Crystal Oscillator Circuit



Source program:

```
/*Enable HSE*/
RCC->CR |= ((uint32_t)RCC_CR_HSEON);
/*Wait till HSE is ready and if Timeout is reached exit*/
do
{
   HSEStatus = RCC->CR & RCC_CR_HSERDY;
   StartUpCounter++;
} while((HSEStatus == 0) && (StartUpCounter != HSE_STARTUP_TIMEOUT));
)
```

3.2 PLL frequency multiplication

Problem description

After doubling to 24MHz using PLL, the frequency output through the PA8 pin is unstable.

Solutions

When using PLL multiplication, first use a large multiplication coefficient to increase the frequency of the VCO, and then output at a lower frequency. For example, increase the PLL

frequency to 48MHz and then divide its frequency to 24MHz through an AHB prescaler.

4 GPIO

4.1 BOOT pin

Problem description

Boot0 pin is suspending, and fails to start the program from Flash.

Solutions

It is recommended not to suspend the pins, but to set the pins to high or low level.

4.2 Pin level delay

Problem description

When Switching the I/O pin mode directly from "push-pull output high level" to "input mode", there is a level delay phenomenon. For example, at 55℃ and 3.3.V, there is a level delay phenomenon when switching from push-pull input high level to pull-down input.

Solutions

Choose either of the following solutions:

- After the push-pull output high-level is completed, insert the push-pull low-level output or configure as open-drain pull-up output mode, and then switch to input mode.
- Increase the duration of the input/output pull-down input mode (e.g. 3s).

5 Tool

5.1 Burning

Problem description

When the xxT packet is used on Keil 5.27 or 5.28 version, it cannot be burnt through AP-LINK, ULINK2 and ST-LINK.

Solutions

Choose either of the following solutions:

- Use APEXMIC.APM32F0xx_DPF or keil.xTM32F1xx.DFP.2.2.0.pack.
- Modify keil.xTM32F0xx.DFP.pdsc, and the specific operation is as follows:

(1) Look for keil.xTM32F1xx.DFP.pdsc under the installation directory of keil;

(2) Select the file, and right-click to choose the attributes;

(3) Remove the read-only attribute of the file;

(4) Open keil.xTM32F0xx.DFP.2.2.0.pack, and look for the location of Not a genuine xT Device! Abort connection;

(5) Try to find the following content:

```
<!--
Query(0,”Not a genuine xT Device! Abort connection”,1);
Message(2,”Not a genuine xT Device! Abort connection.”);
-->
```

(6) Log out.

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
August 2025	2.1	● Add Chapter 4.2
April 2026	2.2	● 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

The information in this document replaces the information provided in all previous versions of the document.