

APM32F003x6

Errata Sheet

Version: V 2.0

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1 Introduction

This Manual mainly introduces the limitations of the APM32F003x6 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 Product Version and Silk Screen Printing Instructions

Figure 1 Instructions for Silk Screen Printing of TSSOP20 and SOP20

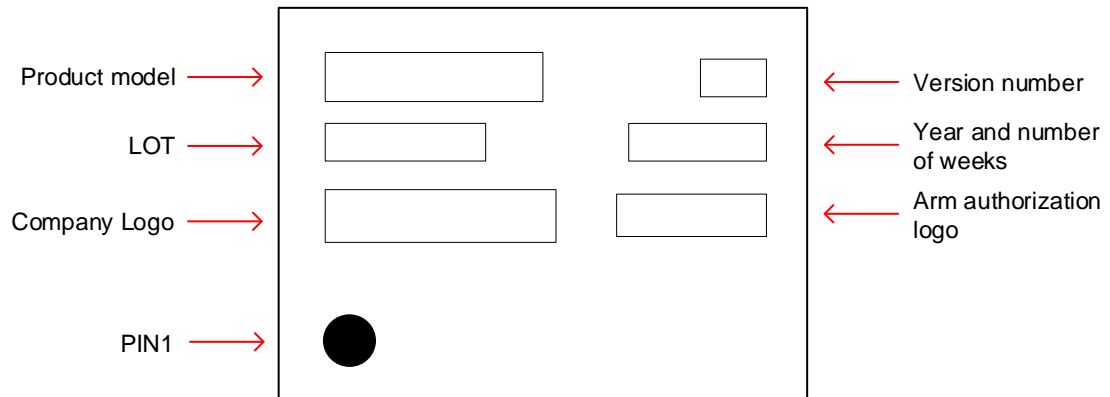
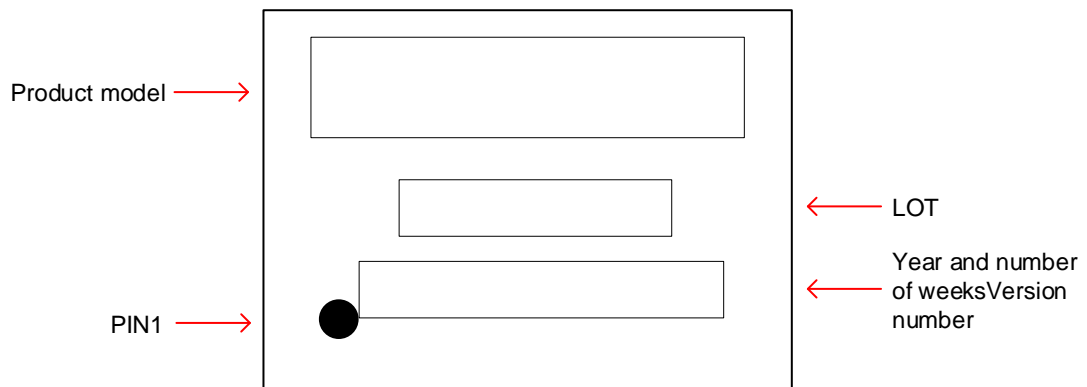


Figure 2 Instructions for Silk Screen Printing of QFN20



3 Errata List

Table 1 Errata List

Category	Introduction	Product version
		B
GPIO	GPIO configuration conflict	•
ADC	ADC continuous conversion	•
I2C	I2C communication exception	•
USART	Use of USART	•
Tool	Burning	•

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

4 GPIO

4.1 GPIO configuration conflict

Problem description

There is a conflict between the main function configuration and interrupt configuration of GPIO. It is specifically manifested as continuously configuring PD6 in the while of the main program, enabling timed interrupts, flipping PD3 during interrupt, and encountering PD3 flipping exception after running.

Solutions

Choose either of the following solutions:

- Use variables as the mutual exclusion flag to avoid;
- In the interrupt function, only make marking, and execute the GPIO value assignment in the while task of the main.

5 ADC

5.1 ADC continuous conversion

Problem description

In the single-channel continuous conversion mode, different channels are involved at two initializations, the EOC cannot be set during the second initialization, so the ADC cannot be used.

Solutions

In the ADC1_ConversionConfig library function, before configuring CSR, first configure the continuous scanning mode. The specific operating steps are:

- (1) Configure the continuous scanning mode;
- (2) Configure CSR;
- (3) Normally configure the continuous or discontinuous mode;
- (4) Enable the scan mode.

6 I2C

6.1 I2C communication exception

Problem description

During hardware I2C communication, GPIO is initialized first, then I2C is initialized, and I2C communication may be abnormal in the first communication. Specifically, when the BUSYF flag is set to 1, the hardware cannot be cleared to zero, and the bus is busy and cannot be released.

Solutions

Choose either of the following solutions:

- Before enabling I2C, configure PB4 and PB5 to open-drain output 1 (i.e. set 1 first, then configure open drain), and then configure BUSY=0. After I2C is enabled, the BUSY flag is not affected and the communication is normal.
- Simulate I2C stop signal (stop signal), clear the hardware to zero and release the bus.

7 USART

7.1 Use of USART

Problem description

If USART2 is turned on, TMR1A_CH1 (PD1) cannot output PWM;

If USART3 is turned on, TMR2_CH (PA3) cannot output PWM;

Solutions

Avoid the above usage.

8 Tool

8.1 Burning

Problem description

F003 is easy to enter a self-locking state when debugging and burning through JLink or ST-LINK.

Usually, users will operate OB themselves in the main function, and if the OB operation is interrupted or incomplete, the chip will be locked easily because there are configuration bits for read protection and write protection on the OB address. In addition, abnormal changes in the OB value may also lead to abnormal program operation or system crash.

Solutions

The APM32 ROG V1.014 burner upper computer released on Geehy's official website can assist in configuring OB.

9 Revision history

Table2 Document Revision History

Date	Version	Revision History
August 2024	1.0	New edition

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8. Scope of Application

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