

# 零死角玩转STM32—M4系列



## 初识STM32固件库

淘宝：[fire-stm32.taobao.com](http://fire-stm32.taobao.com)

论坛：[www.firebbs.cn](http://www.firebbs.cn)



扫描进入淘宝店铺

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参考资料:《零死角玩转STM32》“初识STM32固件库” 章节

什么是固件库



什么是固件库

# 如何获取固件库



- 1、固化到EEPROM或者是芯片的FLASH中
- 2、操作的是最底层的设备

# 如何获取固件库

## 1、配套的光盘资料获取

A盘（资料盘）\3-程序源码\F4固件库

## 2、官网获取

<http://www.stmcu.org/document/list/index/category-524>

# 固件库文件分析简介



# 固件库文件分析



## 尝试自己分析

STM32F4xx固件库文件分析		
外设相关	stm32f4xx.h	外设寄存器定义
	system_stm32f4xx.h	1、用于系统初始化
	system_stm32f4xx.c	2、用于配置系统时钟
	stm32f4xx_xx.h	外设固件库头文件
	stm32f4xx_xx.c	外设固件库
	misc.h	跟中断相关的固件库
	misc.c	
内核相关	core_cm4.h	内核寄存器定义
	core_cmFunc.h	操作内核相关的固件库，用的非常少
	core_cmInstr.h	
	core_cmSimd.h	
用户相关	stm32f4xx_it.h	用户编写的中断服务函数都放在这里
	stm32f4xx_it.c	
	main.c	main函数存在的地方



# 库帮助文档的使用



stm32f4xx\_dsp\_stdperiph\_lib\_um.chm

The screenshot shows a help window titled "STM32F40x/41x/427/437/429/439/401/411xE/446xx DSP and Standard Peripherals Library". The left sidebar contains a tree view of the library's contents, with "GPIO" and "Functions" expanded. The "GPIO\_SetBits" function is selected in the list. The main content area displays the function's prototype, description, notes, parameters, return values, and references. Green boxes highlight specific sections: "函数原型" (Function Prototype), "功能简介" (Function Description), "输入参数说明" (Parameter Description), and "返回值说明" (Return Value Description).

**函数原型**

```
void GPIO_SetBits ( GPIO_TypeDef * GPIOx,
                    uint16_t      GPIO_Pin
                  )
```

**功能简介**

Sets the selected data port bits.

**输入参数说明**

**Note:**  
This functions uses GPIOx\_BSRR register to allow atomic read/modify accesses. In this way, there is no risk of an IRQ occurring between the read and the modify access.

**Parameters:**

**GPIOx,:** where x can be (A..K) to select the GPIO peripheral for STM32F405xx/407xx and STM32F415xx/417xx devices x can be (A..I) to select the GPIO peripheral for STM32F42xxx/43xxx devices. x can be (A, B, C, D and H) to select the GPIO peripheral for STM32F401xx devices.

**GPIO\_Pin,:** specifies the port bits to be written. This parameter can be any combination of GPIO\_Pin\_x where x can be (0..15).

**返回值说明**

**Return values:**  
None

Definition at line [412](#) of file [stm32f4xx\\_gpio.c](#).

References [assert\\_param](#), [GPIO\\_TypeDef::BSRR](#), [IS\\_GPIO\\_ALL\\_PERIPH](#), and [IS\\_GPIO\\_PIN](#).

Referenced by [SC PowerCmd\(\)](#), and [SC VoltageConfig\(\)](#).



**固件库手册都是英文的  
看不懂 怎么办？**

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**THANKS**

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