

# ***Release Notes for AT32F403 Firmware Library***

## **V2.1.2-2024/12/13**

1. Updated core DSP library.
2. Updated CAN driver.
3. Updated SDIO protocol layer driver, and added emmc\_card demo.
4. Updated USB driver.
5. Updated I2C eeprom demo and added multi-page write logic.
6. Optimized PWR driver and demo.
7. Updated some notes.

## **V2.1.1-2024/08/08**

1. Adjusted bus clock frequency in sdio demo.
2. Updated “i2c\_flag\_clear” and “i2c\_init” functions.
3. Updated msc iap demo, and improved compatibility.
4. Updated initialization configuration process in I<sup>2</sup>C DMA related demos.
5. Fixed AC6 compilation problems of some demos.
6. Updated some notes.

## **V2.1.0-2024/01/26**

1. Updated the leap year calculation function.
2. Updated USB HID report descriptor.
3. Updated some notes.

## **V2.0.9-2024/01/05**

1. Updated the counter counting mode in input\_capture demo of timer.
2. Fixed HID low-speed identification problems in USB demo.
3. Updated systick initialization function in systick interrupt demo.
4. Added winusb demo.

5. Updated the method on how to call the `xx_interrupt_flag_get` function in all demos.

### **V2.0.8-2023/10/26**

1. Removed SRAM extension demo.
2. Updated some notes and readme.

### **V2.0.7-2023/08/04**

1. Added AT32IDE project to demos under utilities.
2. Added CRC polynomial support.
3. Updated USB driver and demo, improved data alignment and code process.
4. Improved redirecting compatibility while using `printf` in IAR9.
5. Added macro definitions regarding Flash size and Flash demo.
6. Updated some notes.

### **V2.0.6-2023/02/16**

1. Fixed AC6 compilation problems in freertos demo in utilities.
2. Added `LEXT_VALUE` macro definition in *at32f403\_conf.h*.
3. Added spim related descriptions in *\*.ld* file to support spim address link processing in gcc environment.
4. Added XMC `pc_card` demo.
5. Updated some notes.

### **V2.0.5-2022/11/18**

1. Deleted the version and date entries from the header of each file.
2. Added *Release Notes\_Drivers* to record the updates of drivers separately, which is located under `libraries\drivers`.
3. Updated I<sup>2</sup>C interrupts and changed DMA demo to non-blocking.
4. Fixed the problem of USB `cdc_msc` composite failure in Linux environment.
5. Updated USB virtual msc iap demo for Linux environment.
6. Updated USB audio related contents for better compatibility;
7. Updated `IAR_Programmer.exe`.

8. Added interrupt enable determination to the flag bit detection for the interrupt function of USART interrupt demo.
9. Added repeat\_conversion\_loop\_transfer demo to ADC to allow DMA to obtain ADC data in a circular way.

### **V2.0.4-2022/08/16**

1. Updated I<sup>2</sup>C EEPROM demo, and added 16-bit address support.
2. Added IAR v9.3 project demo into template.
3. Fixed the problem of printf's failure to output in gcc environment.
4. Startup file supports configuration wizard.

### **V2.0.3-2022/06/28**

1. Added a demo on how to enable FLASH access protection.
2. Added IO toggle demo.
3. Updated some demos, their drive processes, and some notes.

### **V2.0.2-2022/05/20**

1. Modified descriptors of the USB virtual msc iap demo.
2. Added USB composite\_vcp\_msc demo.
3. Modified SD card demo, and optimized SD card initialization and identification process.
4. Updated some demos, their drive processes, and some notes.

### **V2.0.1-2022/04/02**

1. Added wdt\_standby demo.
2. Introduced DSP related source code, and added cmsis\_dsp demo.
3. Updated some demos, their drive processes, and some notes.

### **V2.0.0-2022/02/11**

1. Initial release of AT32F403 series firmware library.