

# Release Notes for AT32F435\_437

## Firmware Library

### V2.1.2-2023/02/16

1. Improved AC6 compiling issue in the *freertos demo* of utilities
2. Improved EMAC demo, updated cc.h file to solve AC6 compiling issue (alignment error), and *lwip assert* information can be output from a serial interface
3. Updated lwip lower-level package interface in EMAC demo to support multiple-packet transfer
4. Added LEXT\_VALUE definition in the at32f435\_437\_conf.h
5. Added section SPIM descriptions in the \*.ld file to better support SPIM address linking in GCC
6. Adjusted the location in which the function *crm\_reset* is called in the *system\_clock\_config*, with the aim to avoid error to occur during system clock switching
7. Adjusted the time when USB address needs to be set, and modified the process of handling USB host emulation timeout
8. Added XMC pc\_card demo
9. Updated the function *qspi\_data\_write* process in the QSPI flash demo to resolve write data error when the incoming Flash start address is not page aligned
10. Updated some notes

### V2.1.1-2022/11/18

1. Removed the versions and records located in file headers
2. Added release notes drivers which are used to record drivers update, in libraries/drivers directory
3. Fixed the problem of USB cdc\_msc failed in linux
4. Updated USB virtual msc iap demo supporting linux
5. Updated USB audio content to provide better compatibility
6. Added interrupt enable judgement to flag bits in the USART interrupt demo
7. Added repeat\_conversion\_loop\_transfer demo to ADC, using DMA circular mode to get ADC data
8. Increase the upper limit of VCO clock to 1200 MHz

### V2.1.0-2022/08/16

1. Updated I2C eeprom demo with 16-bit address support
2. Added USB host CDC demo
3. Added QSPI XIP mode Flash read demo
4. Added IARv 9.3 demo (in template)
5. Fixed the problem of being unable to output printf in gcc environment
6. Startup file supports configuration wizard graphic configuration

## **V2.0.9-2022/06/28**

1. Added USART RS485 demo
2. Added IO toggle demo
3. Added USB composite\_vcp\_msc demo
4. Added Flash access protection enable demo
5. Updated some demos and their drive process, and revised notes

## **V2.0.8-2022/04/25**

1. Changed descriptors in the USB virtual msc iap demo
2. Added EMAC-related demo about network connection status detection, and updated local\_time variable
3. Disabled cache feature of xip mode in QSPI-related demo
4. Updated some demos and revised notes

## **V2.0.7-2022/04/02**

1. Added lvgl\_music\_player demo to the at\_surf\_f437 evaluation board
2. Introduced DSP-related source codes and a new cmsis\_dsp demo
3. Updated some demos and their drive process, and revised notes

## **V2.0.6-2022/03/11**

1. Added wdt\_standby demo
2. Added demos related to at\_surf\_f437 evaluation board

## **V2.0.5-2022/02/11**

1. Added virtual\_comport demo in USB
2. Added dual OTG-related demos (1Host&1Device, 2Host, 2Device)
3. Improved the compatibility of USB msc iap demo across different systems
4. Updated some demos and their drive process, and revised notes

## **V2.0.4-2021/12/31**

1. Revised wrong parameter definitions in the interrupt priority group
2. Integrated the serial port initialization and redirection functions of printf into xx\_board.c, and removed related contents in demo
3. Updated some demo to support AC6 and -O3 compilation
4. Added composite\_audio\_hid demo in the USB, and optimized reporting and synchronization mechanism
5. Revised wrong definitions about speed status and duplex modes while using phy dp83848 of AT32F437 EMAC

## **V2.0.3-2021/12/17**

1. Revised flag clear functions of peripherals in order to avoid inappropriate bit operations
2. Revised the 4-byte alignment problem of USB device array
3. Updated the member name under SDRAM structure
4. Updated the virtual space of virtual\_msc\_iap demo to 100 MB
5. Revised bulk transfer complete problem of the serial port in the composite\_vcp\_keyboard demo
6. Updated some contents and notes of XMC demo
7. Updated pin initialization of DVP demo and revised instability problem
8. Update transmit functions related to keyboard in USB demo
9. Updated timer frequency configuration process for triggering ADC conversions in ADC demo
10. Adjusted XMC peripheral driver structure, and updated the corresponding demo

## **V2.0.2-2021/11/26**

1. Updated some notes and readme
2. Modified the sampling frequency judgement process for configuring the microphone frequency using audio codec
3. Revised the I2C communication interface configuration error of audio code
4. Revised USB audio feedback function error
5. Revised byte alignment problem while USB writing to fifo
6. Added a demo of mem\_map of SCFG
7. Changed the macro definition I2Cx\_SPEED in I2C demo to I2Cx\_CLKCTRL
8. Updated pwc\_wakeup\_pinx\_enable and pin-related functions, and enable all pins to call the same interface pwc\_wakeup\_pin\_enable

## **V2.0.1-2021/11/15**

1. Updated some flag\_clear functions of some peripheral drivers, and revised improper operational problem when bit is w1c
2. Added a process to judge unlock flags after unlocking USD or SLIB
3. Modified the process of driver functions in QSPI peripheral xip/cmd modes
4. Updated some ADC demos, and revised original configuration error
5. Updated USB audio demo, and revised recording problem
6. Updated SDRAM peripheral configuration parameters in sdram\_dma demo
7. Updated the notes and descriptions in some documents

## **V2.0.0-2021/09/06**

1. Initial release of AT32F435/437 firmware library