

## AT32F4xx USB Composite MSC HID

### Introduction

This document introduces USB composite msc and hid (MSC is external SPI FLASH U disk, and hid is keyboard device) demo, which can be applied to other series in a similar way.

*Note: The corresponding code in this application note is developed on the basis of V2.x.x BSP provided by Artery. For other versions of BSP, please pay attention to the differences in usage.*

Applicable products:

Part number	AT32F4xx
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List of peripherals:

Main peripheral	OTG_device/USB_device
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# 1 Application method

## 1.1 Hardware requirements

- 1) AT-START-F435 V1.0 evaluation board (or the corresponding evaluation board of other series), and the external SPI FLASH is WINBOND W25Q128FV.

## 1.2 Software requirements

- 1) SourceCode
  - composite\_msc\_hid source code

*Note: All projects are built around keil 5. If users want to use them in other compiling environments, please refer to BSP\_V2.x.x\project\xxx\templates (such as IAR6/7/8, keil 4/5) for a simple change.*

## 1.3 Example of application

- 1) Open the composite\_msc\_hid project, and download to the evaluation board. Connect the evaluation board USB interface to PC, and the PC device manager will display a U disk device, which can be accessed and programmed after formatting.
- 2) The PC device manager also displays a keyboard device. Press the on-board User button, and the PC will output "Keyboard Demo".

*Note: The external SPI FLASH used in this demo is WINBOND W25Q128FV, based on which the commands supported by code are compiled. If other external storage memories are used, it is necessary to modify the underlying driver.*

## 2 Revision history

Table 1. Document revision history

Date	Version	Revision note
2022.09.26	2.0.0	Initial release.

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