

## AT32F4xx SPI Half-duplex Communications

## Introduction

This sample code uses AT32F403Axx to demonstrate how to use SPI half-duplex mode for communications

*Note: This sample code is written based on Artery's V2.x.x BSP. For other versions of BSP, users should pay attention to the differences in use.*

Applicable products:

Product series	AT32F403Axx
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List of major peripherals used:

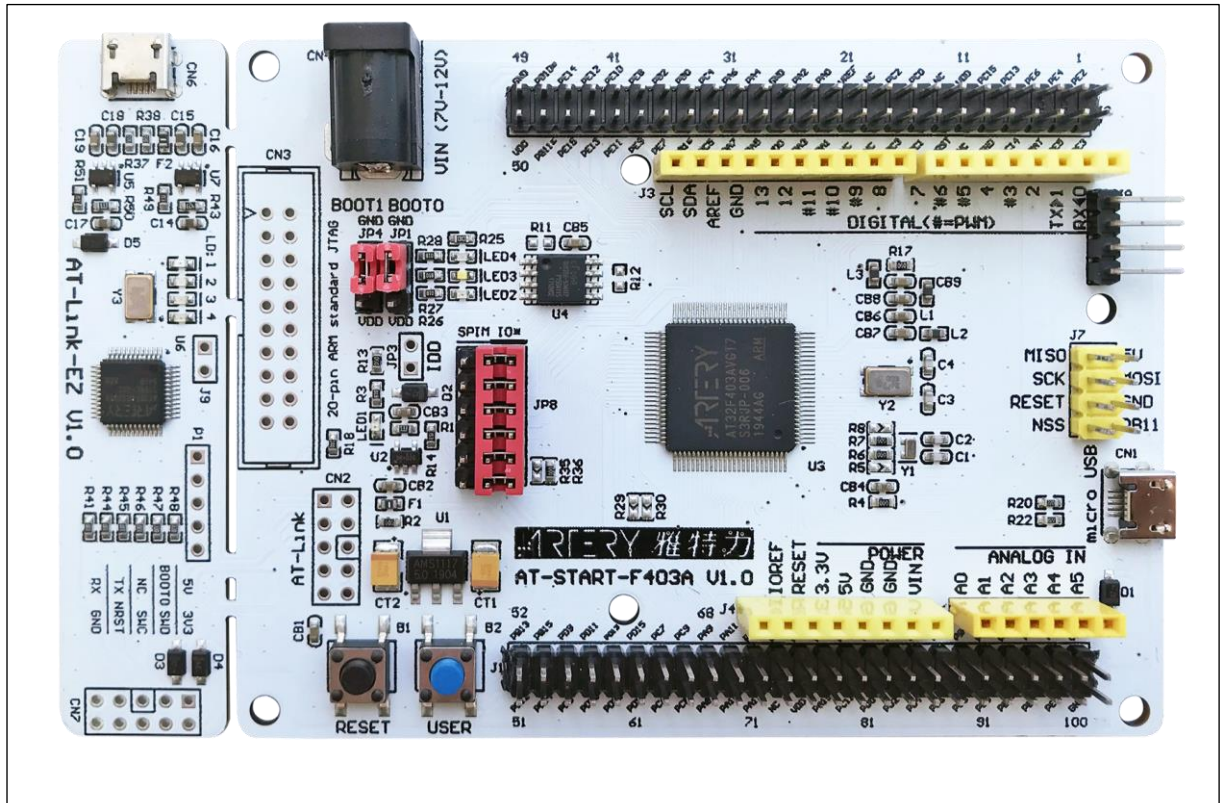
Peripherals	SPI
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## 1 Quick start

### 1.1 Hardware resources

- 1) AT-START-F403A V1.0 evaluation board (use evaluation board corresponding to specific product series)
- 2) SPI1: PA5, PA7;  
SPI2: PB13, PB14

Figure 1. AT-START-F403A V1.0 evaluation board



### 1.2 Software resources

- 1) SourceCode
  - spi\_halfduplex

*Note: All of projects are built based on Keil 5. For the need to run them in other compiling environments, user can make simple adjustments according to AT32xxx\_Firmware\_Library\_V2.x.x\project\at\_start\_xxx\templates.*

### 1.3 Example case

- 1) Open “spi\_halfduplex” source code, compile and download it to the evaluation board AT-START-F403A
- 2) Connection:
  - PB13 < ---- > PA5
  - PB14 < ---- > PA7
- 3) LED2 will light up if communications are successful

## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
2021.12.02	2.0.0	Initial release

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