

AT32F4xx SPI Data Transfer Using DMA

Introduction

This sample code demonstrates how to use DMA for SPI data transfer where the master acts as a transmitter (sends data) and slave as a receiver (receives data).

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:

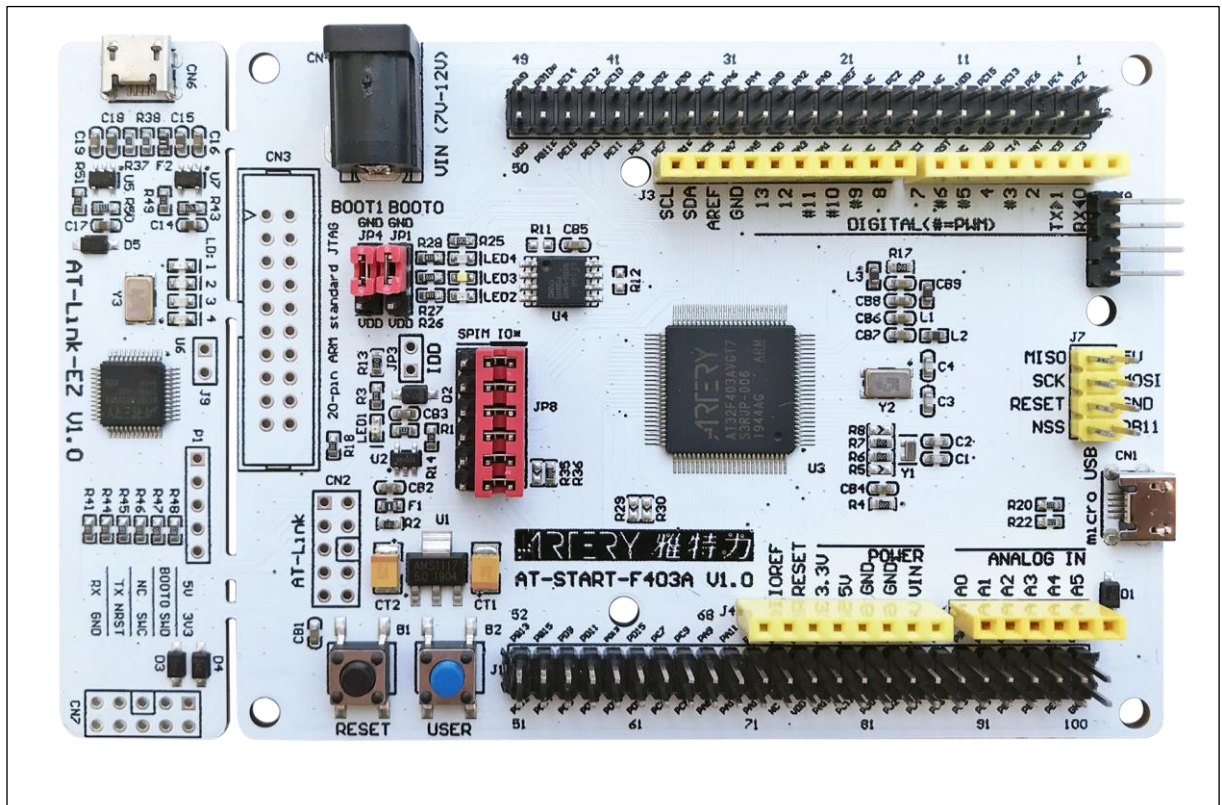
Peripherals	SPI
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1 Quick start

1.1 Hardware resources

- 1) AT-START-F403A V1.0 evaluation board (choose evaluation board based on specific product series)
- 2) SPI1: PA4, PA5, PA7;
SPI2: PB12, PB13, PB14

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



1.2 Software resources

- 1) SourceCode
 - spi_dma_ma_tx_sla_rx

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_dma_ma_tx_sla_rx” source code, compile and download it to the evaluation board AT-START-F403A
- 2) Connection:
PB12 < ---- > PA4
PB13 < ---- > PA5
PB14 < ---- > PA7
- 3) LED2 will light up if communications are successful and data are correct.

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
2021.12.02	2.0.0	Initial release
2022.03.25	2.0.1	Updated document format

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