

AT32F4xx I2C Master TX and Slave RX with 10-bit Address

Introduction

This sample code demonstrates how to use 10-bit address to perform master transmission and slave reception for AT32F403Axx series I2C.

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:

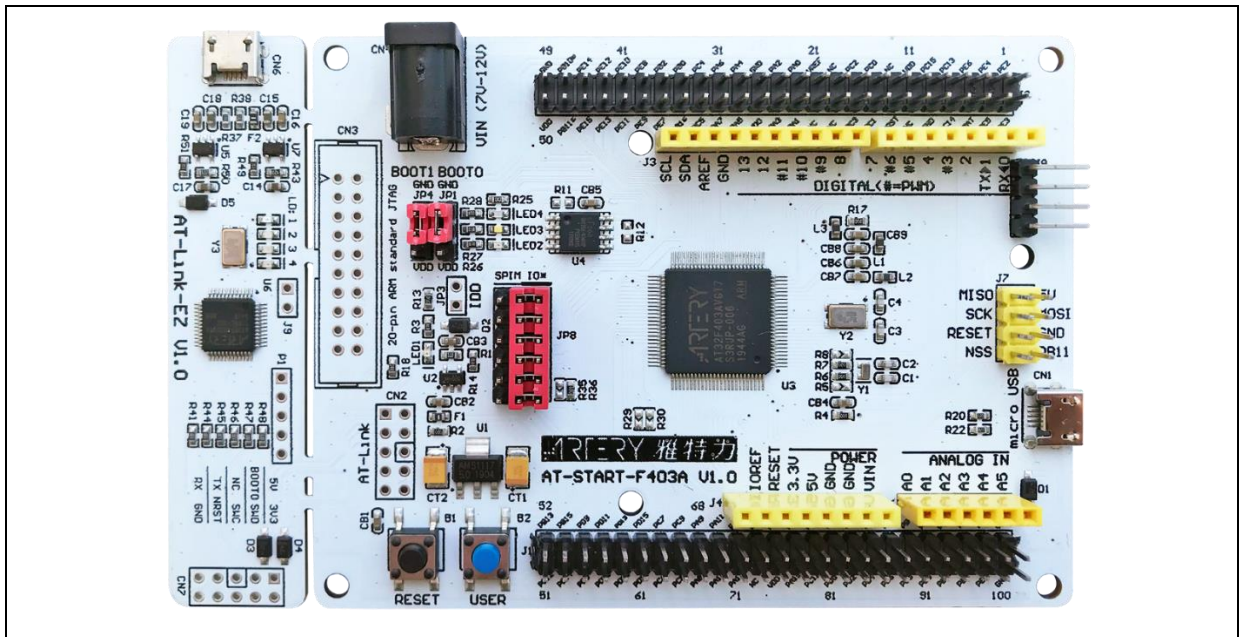
Peripherals	I2C
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1 Quick start

1.1 Hardware resources

- 1) AT-START-F403A V1.0 evaluation board (select evaluation board according to the corresponding MCU series)
- 2) I2C1: PB6, PB7

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



1.2 Software resources

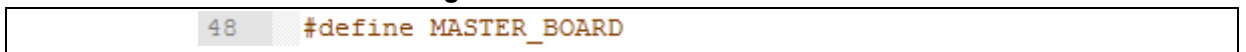
- 1) Source code
 - i2c_10bitaddr_poll_ma_tx_sla_rx

Note: All of projects are built based on Keil 5. For the need to run 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 i2c_10bitaddr_poll_ma_tx_sla_rx, compile and download it to the evaluation board AT-START-F403A
- 2) In main. c, configure a macro definition to select master or slave

Figure 2. Master/Slave selection



- 3) After power-on reset for both master and slave, first press USER (PA0) on slave, and then USER on master for starting test
- 4) If LED3 is ON, it means success, otherwise, LED2 will keep blinking

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
2021.12.03	2.0.0	Initial release
2022.03.25	2.0.1	Updated document format

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