

## Full-duplex SPI emulation software expansion for STM32Cube

Data brief

### Features

- Simplex/full-duplex, synchronous, serial communication
- Master and slave operations
- SPI clock up to 6 MHz in full-duplex mode with CPU operating at 168 MHz
- Programmable data word length: 8 and 16 bits
- Programmable clock polarity and phase
- Programmable data order with MSB-first or LSB-first shifting
- Flexible GPIO usage: all GPIOs can be configured as SPI MOSI/MISO
- Status flags/interrupt

### Description

The X-CUBE-SPI-EMUL embedded software provides an emulated simplex or full-duplex SPI in the master and slave modes.

The SPI emulator is needed in applications that require more SPIs.

The X-CUBE-SPI-EMUL embedded software also offers two examples of communication between a hardware and a software SPI.

For more details refer to the application note AN4678.



## 1 Ordering information

X-CUBE-SPI-EMUL is available for free download from STMicroelectronics.

## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
20-Aug-2015	1	Initial release for features and description only.

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