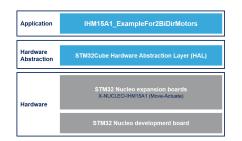


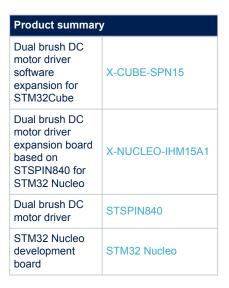


## Dual brush DC motor driver software expansion for STM32Cube









#### **Features**

- Driver layer for the full management of the STSPIN840 dual brush DC motor driver
- Sample implementation to control up to two bidirectional brush DC motors, available on NUCLEO-F401RE, NUCLEO-F334R8 or NUCLEO-F030R8 when connected to an X-NUCLEO-IHM15A1 expansion board
- Easy portability across different MCU families, thanks to STM32Cube
- · Free, user-friendly license terms

## **Description**

The X-CUBE-SPN15 is an expansion software package for STM32Cube. The software runs on the STM32 Nucleo providing management of STSPIN840 to control dual brush DC motors. The expansion is built on STM32Cube software technology to ease portability across different STM32 microcontrollers.

It is compatible with the NUCLEO-F401RE, NUCLEO-F334R8 or NUCLEO-F030R8 development boards connected to an X-NUCLEO-IHM15A1 expansion board.

The software comes with a sample implementation driving two bidirectional dual brush DC motors.



## 1 What is STM32Cube?

STMCube™ is designed by STMicroelectronics to reduce development effort, time and cost across the entire STM32 portfolio.

STM32Cube version 1.x includes:

- STM32CubeMX, a graphical software configuration tool that allows the generation of C initialization code using graphical wizards.
- A comprehensive embedded software platform specific to each series (such as the STM32CubeF4 for the STM32F4 series), which includes:
  - the STM32Cube HAL embedded abstraction-layer software, ensuring maximized portability across the STM32 portfolio
  - a consistent set of middleware components such as RTOS, USB, TCP/IP and graphics
  - all embedded software utilities with a full set of examples

### How does this software complement STM32Cube?

This software is based on the STM32CubeHAL hardware abstraction layer for the STM32 microcontroller. The package extends STM32Cube by providing a board support package (BSP) for the X-NUCLEO-IHM15A1 expansion board based on the STSPIN840.

The drivers abstract low-level details of the hardware and allow the middleware components and applications to access functions and data associated with the dual brush DC motor driver.

The software package includes a sample application for driving a dual brush DC motor using the user button of the STM32 Nucleo board or the user interface utility based on PC terminal.

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# **Revision history**

**Table 1. Document revision history** 

Date	Version	Changes
16-May-2018	1	Initial release.

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