

## Dual brush DC motor driver software expansion for STM32Cube

Application	IHM15A1_ExampleFor2BDirMotors
Hardware Abstraction	STM32Cube Hardware Abstraction Layer (HAL)
Hardware	STM32 Nucleo expansion boards X-NUCLEO-IHM15A1 (Move-Actuate)
	STM32 Nucleo development board

### 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.



Product summary	
Dual brush DC motor driver software expansion for STM32Cube	<a href="#">X-CUBE-SPN15</a>
Dual brush DC motor driver expansion board based on STSPIN840 for STM32 Nucleo	<a href="#">X-NUCLEO-IHM15A1</a>
Dual brush DC motor driver	<a href="#">STSPIN840</a>
STM32 Nucleo development board	<a href="#">STM32 Nucleo</a>

## 1 What is STM32Cube?

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STM32Cube™ 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.

## Revision history

**Table 1. Document revision history**

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

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