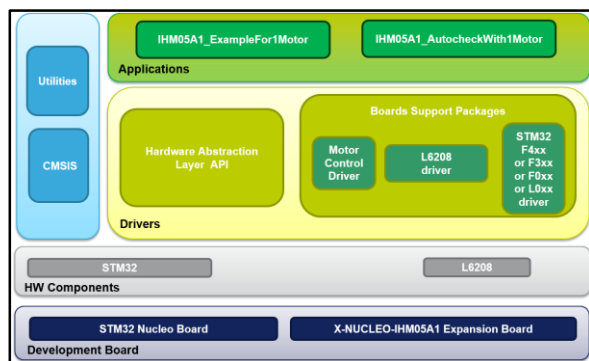


Bipolar stepper motor driver software expansion for STM32Cube

Data brief



Description

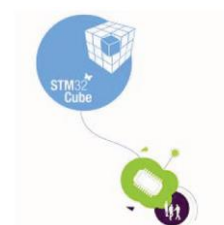
The X-CUBE-SPN5 expansion package for STM32Cube gives you full control of stepper motor operation. With this software running on the STM32 microcontroller of an NUCLEO-F401RE, NUCLEO-F030R8, NUCLEO-F334R8 or NUCLEO-L053R8 board, you can build and test your applications with ST's fully integrated L6208 stepper motor driver on an X-NUCLEO-IHM05A1 board.

The STM32Cube platform allows flexible solution design and integration in a persistent environment. Build your own ideas from scratch or begin experimenting immediately with the bundled sample application to control a single bipolar stepper motor.

Information regarding STM32Cube is available on www.st.com at <http://www.st.com/stm32cube>.

Features

- A driver layer for the complete management of the L6208 (driver for bipolar stepper motors) device integrated in the X-NUCLEO-IHM05A1 expansion board
- Sample application for single bipolar stepper motor control
- Easy portability across different MCU families, thanks to STM32Cube
- Free, user-friendly license terms



What is STM32Cube?

STM32Cube™ represents the STMicroelectronics initiative to make developers' lives easier by reducing development effort, time and cost. STM32Cube covers the 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 STM32Cube for the STM32 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 STM32 expansion board based on the L6208.

It allows complete management of the L6208 through a comprehensive set of APIs, and gives you access to the following features:

- Read and write of device parameters
- Configuration of GPIOs and IRQs (for enabling, direction, current decay and micro-stepping)
- Control of position, speed, acceleration and deceleration
- Command locking until the device completes movement
- Handling of overcurrent and thermal alarms (flag interrupt handling)

The software package includes sample bipolar stepper motor applications to help you get started.

1 Revision history

Table 1: Document revision history

Date	Version	Changes
17-Jul-2015	1	Initial release.
09-Mar-2016	2	Text edits throughout document Updated cover image Added NUCLEO-F334R8 compatibility information

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