

**STSPIN32F0 FOC firmware example**

Data brief

**Features**

- Based on the STM32 PMSM FOC Software Development Kit
- Features 3-shunt current-sensing topology
- Sensorless operation based on state observer
- Speed and torque control
- Native support for the STEVAL-SPIN3201 board
- Full customization and real-time communication through the ST MC Workbench PC software
- Firmware ANSI C, MISRA compliant

**Description**

The STSW-SPIN3201 is a firmware example based on the STM32 PMSM FOC Software Development Kit (STSW-STM32100) for the STSPIN32F0.

By relying on the industry-standard Cortex<sup>®</sup>-M core, it allows the user to evaluate the STSPIN32F0 performance in applications driving a 3-phase permanent-magnet motor in field oriented control (FOC).

The STM32 PMSM FOC SDK is a part of ST's motor control ecosystem, which offers a wide range of hardware and software solutions for motor control applications.

The ST MC Workbench is PC software which reduces the design time and effort in FOC firmware library configuration. Through a graphical user interface (GUI), the user can generate all parameter header files to configure the library in accordance with application requirements, as well as monitor and change some variables of the algorithm in real-time.

## Revision history

**Table 1. Document revision history**

Date	Revision	Changes
10-Nov-2016	1	Initial release.

**IMPORTANT NOTICE – PLEASE READ CAREFULLY**

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2016 STMicroelectronics – All rights reserved

