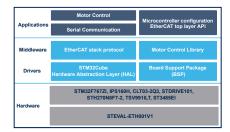


Data brief

Firmware for Servo Drive solution enabling position control through EtherCAT Protocol



Features

- Position control algorithm based on X-CUBE-MCSDK
- Supported EtherCAT slave protocol (V.5.0.8)
- Firmware compliant with STM32Cube framework
- · BSP support for digital actuation interface
- · RS485 interface support

Description

The STSW-ETHDRV01V1 firmware package for the STEVAL-ETH001V1 servo drive solution, implements position control algorithm with real-time communication running on the STM32F767ZI microcontroller. It can manage connectivity, servo drive actuation and digital input/output interface at the same time.

The connectivity includes real-time communication with EtherCAT protocol stack (V. 5.0.8) for the slave node and RS485 communication to interface the hardware with a PC or digital encoder supporting BiSS, EnDat and SSi protocols.

The servo drive actuation implements a position control algorithm using the X-CUBE-MCSDK motor control library to control a PMSM motor rotor position via EtherCAT communication remote control.

Digital actuation interface management is supported by a set of routines, able to manage the IPS160H digital output state according to the information received from the CLT03-2Q3 digital inputs and the command received from the PC through RS485 connection.

Product summary	
Firmware for servo drive solution enabling motor control position through EtherCAT protocol	STSW- ETHDRV01V1
Servo drive solution for multi-axial position control	STEVAL- ETH001V1
Triple half-bridge gate driver	STDRIVE101
STripFET F7 Power MOSFET	STH270N8F7-2
Arm Cortex-M7 MCU	STM32F767ZI
Applications	3-phase field oriented control Industrial servo drives



Revision history

Table 1. Document revision history

Date	Version	Changes
07-Apr-2021	1	Initial release.
20-Apr-2021	2	Updated cover page description. Minor text changes.
27-Jul-2021	3	Updated cover image.

DB4391 - Rev 3 page 2/3



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. For additional information about ST trademarks, please refer to www.st.com/trademarks. 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.

© 2021 STMicroelectronics - All rights reserved

DB4391 - Rev 3 page 3/3