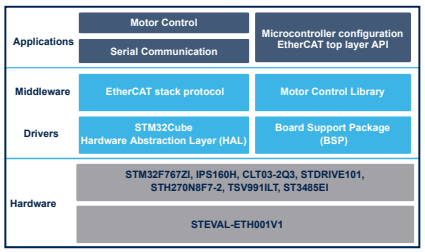
STSW-ETHDRV01V1

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.