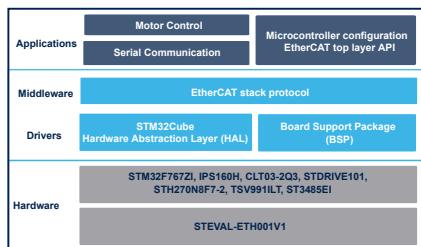


Firmware for Servo Drive solution enabling position control through EtherCAT Protocol



Features

- Position control algorithm based on [X-CUBE-MCSDK](#) (V.5.4.4)
- 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 (V.5.4.4) 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 | STDRAVE101 |
| 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. |

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