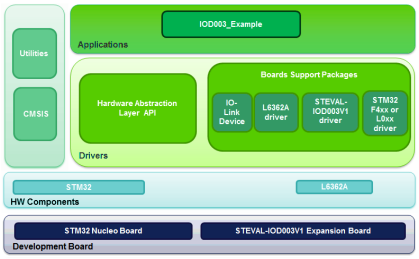
STSW-IOD003

Data brief

L6362A IO-Link communication transceiver device IC evaluation software based on STM32Cube



Features

- Driver layer for the management of the L6362A IO-Link communication transceiver device IC integrated in the STEVAL-IOD003V1 evaluation board
- GPIOs and IRQs configuration
- I/Q channel control for reception and transmission
- Fault interrupt handling
- Sample application for controlling an L6362A device
- Easy portability across different MCU families, thanks to STM32Cube
- Free, user-friendly license terms

Description

The STSW-IOD003 is an evaluation software for the STEVAL-IOD003V1 evaluation board which integrates the L6362A IO-Link transceiver device.

The software runs on the STM32 and provides basic management of the L6362A device.

It is built on top of STM32Cube software technology that eases portability across different STM32 microcontrollers.

The software comes with a sample implementation to show its main functionalities. It is compatible with NUCLEO-F401RE or NUCLEO-L073RZ when connected to a STEVAL-IOD003V1 evaluation board.

Product summary	
L6362A IO-Link communication transceiver device IC evaluation software based on STM32Cube	STSW-IOD003
IO-Link device evaluation board based on L6362A with Arduino connectors for STM32 Nucleo	STEVAL-IOD003V1
IO-Link communication transceiver device IC	L6362A

1 What is STM32Cube?

STMCube™ is designed by STMicroelectronics to reduce development effort, time and cost across the entire 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

1.1 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 STEVAL-IOD003V1 evaluation board based on the L6362A.

The drivers abstract low-level details of the hardware and allow the middleware components and applications to access functions and data associated of the IO-Link transceiver device.

It offers the following features:

- GPIOs and IRQs configuration for Diag and OL pins
- C/Q channel enabling
- reception and transmission via the I/Q channels
- COM mode setting: COM1 (4.8 kbaud), COM2 (38.4 kbaud) or COM3 (230.4 kbaud)
- fault interrupt handling for overtemperature or overload reporting

The software package includes a sample application for driving an L6362A using the user button of the STM32 Nucleo board.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
11-Jun-2018	1	Initial release.