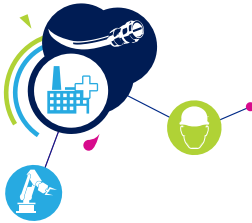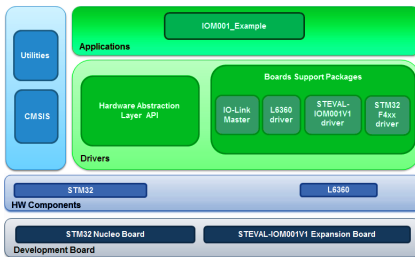# L6360 IO-Link communication transceiver master IC evaluation software based on STM32Cube

Features

- Driver layer for the management of the L6360 IO-Link communication transceiver master IC integrated in the STEVAL-IOM001V1 evaluation board
- Read and write of the L6360 register via I²C
- GPIOs and IRQs configuration
- I/Q channels for reception and transmission
- Fault interrupt handling
- Sample application for controlling up to four L6360 devices
- Easy portability across different MCU families, thanks to STM32Cube
- Free, user-friendly license terms

Description

The STSW-IOM001 is an evaluation software for the STEVAL-IOM001V1 evaluation board which integrates the L6360 IO-Link transceiver master.

The software runs on the STM32 and provides basic management of the L6360 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-F446RE when connected to one or more (up to four) STEVAL-IOM001V1 evaluation board.

Product summary	
L6360 IO-Link communication transceiver master IC evaluation software based on STM32Cube	STSW-IOM001
IO-Link master evaluation board based on L6360 equipped with ST morpho connectors for STM32 Nucleo	STEVAL-IOM001V1
IO-Link communication master transceiver IC	L6360

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For further information contact your local STMicroelectronics sales office.

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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-IOM001V1 evaluation board based on the L6360.

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 master.

It offers the following features:

- Read and write of the device registers via I²C
- GPIOs and IRQs configuration for reset, L+ line and power supply handling
- 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 up to four L6360 devices 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.

IMPORTANT NOTICE – PLEASE READ CAREFULLY