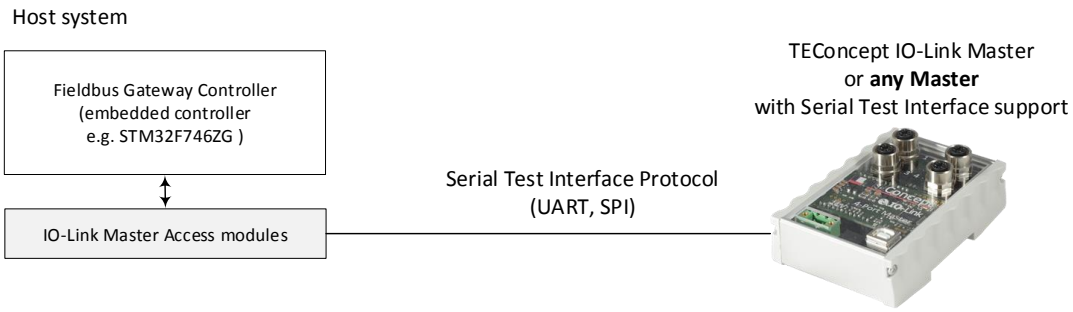
Use IO-Link Master Access Modules for embedded systems

Universal · Smart · Easy



Overview

In use cases where the fieldbus gateway controller is separated from the IO-Link master, an interface between the gateway controller and the IO-Link Master is required. For Master implementations that support the IO-Link Test Interface (see IOL-Test-Spec_10032_V112_Jul14, Appendix A). The IO-Link Master Access Modules are using this test interface to provide an interface for embedded controllers to access IO-Link masters that provide access to the IO-Link test interface.

The main use case for the High Level Master Access Modules is in controlling an IO-Link Master from a Fieldbus Gateway Software Module.

Description

The Master Access Modules offer a simple API to the user, allowing to access master functions like ISDU-read or ISDU-write functions.

These API functions are made available in source code. An example project for the System Workbench for STM32 and for Eclipse is provided for the STM32F746ZG microcontroller (see NUCLEOF746ZG board).

The API functions require to run a real time operating system e.g. FREERTOS.

Hardware resources that are needed are:

- 16-Bit Timer
- UART or SPI master interface

Supported Features

- IO-Link SMI functionality (V1.1.3)
- Communication via UART or SPI
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Delivery

API User Guide

- *SD_TECU_027_001.pdf*

IO-Link Master Access Module Library

- *complete compilable source code*

Demo application

- *iolma_hl_demoapp.h,*
- *iolma_hl_demoapp.c*
- *project files for STM32 system workbench*
- *project files for bare Eclipse (with plugins)*

Options

- *Interleave Mode (long telegrams are interleaved by process data to reduce delays.)*

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