Use ⬡ IO-Link Device Firmware Update
Universal · Smart · Easy

Overview

In 2016 the IO-Link community published a new profile that supports firmware updates via the IO-Link interface. This profile is fully compliant to the IO-Link V1.1.3 specification. Thus, every standard IO-Link Master can be used to update the firmware of an IO-Link device, if the master is controlled by an appropriate software tool that can read and process the specified firmware update files. The firmware update files can be designed by a software tool that is provided by the IO-Link community.

The bootloader transfers a binary image to the device. It receives and checks the image date. Post-processing (de-compression, decryption etc.) and the storage of the image data is device specific. The bootloader provides an appropriate extension interface.
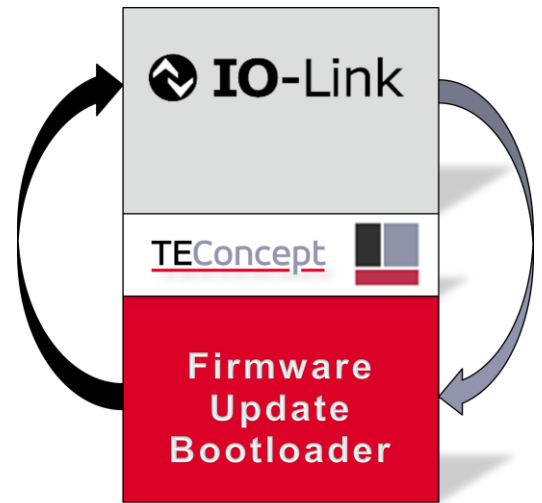
Features

- Complies to Firmware-Update profile V1.1 (Sept. 2019)

- Can be added to an existing IO-Link Device

- Tolerant to power failures and transmission errors during the update process

- Footprint:　RAM:　~0.25 kB
　　　　　　　Flash:　~6 kB

- Comes with control tool that handles firmware update via USB Master

- Currently available ported to the following platforms:

Processor
STM32
LPC
MSP430

More platforms (see TEConcept Device Stack) will be supported on request. Implementation is independent of the PHY.

- Supported development platforms:
Keil, Eclipse/GCC, IAR

Description

The bootloader can be added as standalone software to the IO-Link device firmware.

In this case, the complete technology application, including the IO-Link stack, can be updated.

In application with limited flash memory, it is also possible to add the bootloader in shared mode. In this mode the IO-Link stack and the bootloader share functionality. In this case only the device application (not the IO-Link stack) can be updated.

Delivery

- Buyout license for Firmware Update Bootloader

- Documentation with installation manual

- Compiler & linker example setups

- IO-Link configuration tool with IODD interpreter that handles IO-Link bootloader files

Optional

- Demo Device with bootloader

- Software/Hardware design support

- Conformance tests