Use IO-Link Firmware Update profile
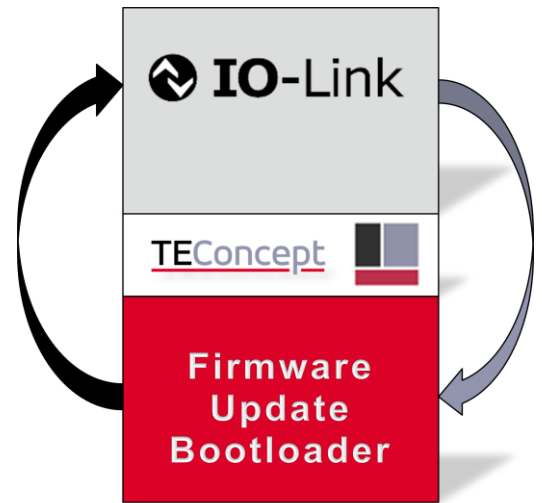
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Overview

In 2016 the IO-Link community has published a new profile that supports firmware updates via the IO-Link interface. The 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 tools 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 an encrypted binary image to the Device. It receives and checks the image date. Post-processing (decompression, 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

▪ Can be added to an existing IO-Link Device

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

▪ Footprint: RAM: ~1kB
            Flash: ~12kB Stack

▪ Comes with control tool that handles firmware update tool

▪ Currently available ported to the following platforms.

Processor	PHY
STM32F1xx	LT3669
STM32L0xx	SN65HVD102 TIOL111
MSP430	L6362A
STM32L471	MAX14821 MAX14827 MAX22513
RL78	HMT 7748
…	CCE4502

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. The bootloader application that handles the received binary file can be adjusted by the user.

Delivery

▪ Buyout license for Firmware update bootloader

▪ Documentation with installation manual

▪ Compiler & linker example setups

▪ IO-Link control tool with IODD interpreter that handles IO-Link bootloader files.

▪ TEConcept IO-Link packager to generate FW-Update files (*.iolfw)

Optional

▪ Demo Device with bootloader

▪ Software/Hardware design support

▪ Conformance tests