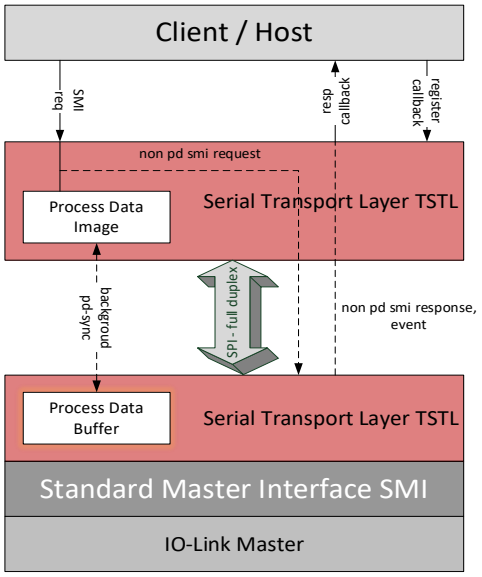
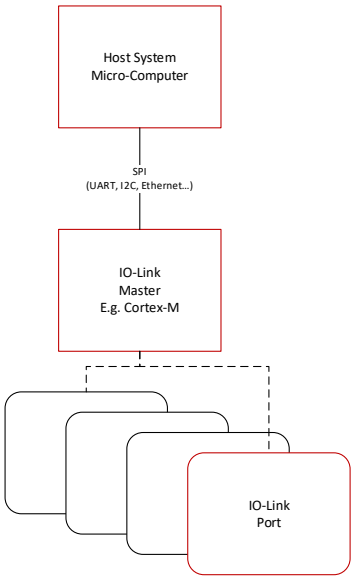
IO-Link TEConcept Serial Transport Layer





Overview

The TEConcept Serial Transport Layer “TSTL” connects a separated IO-Link Stack controller to a Host system running on an application microprocessor.

Description

We have designed a software module for low latency transfer of IO-Link Standard Master Interface Services (SMI) of multiple IO-Link Ports over one serial communication line in an error-robust manner.

Features

- IO-Link V1.1.3 compatible
- Standard Master Interface “SMI” support
- Sample & Hold synchronization with Ports
- Non-blocking client-side process data access
- CRC based retransmission scheme
- Both full-duplex and half-duplex data transfer
- Configurable, fixed telegram length
- Independent channel for on-request-data
- API needs only 3 interface functions
- Mostly symmetric design
- Currently support for SPI, UART and Ethernet
- C-99 compatible source code

Advantages

- Extendible to other serial interfaces
- Simultaneous support of multiple IOL-ports with different cycle times
- Deterministic, fast process data exchange
- Independent Parameter/Event processing
- Data access with DMA supported
- Communication seamlessly resumed, if one side temporarily halts operation.
- Immune to transmission errors
- Multiple instances on client-side

Delivery

- API Guide
- IO-Link TSTL source files Client side
- IO-Link TSTL source files Master side
- Client Demo Application

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