IO-Link
IO-Link Device Stack V1.1.2

Overview
Modern sensors and actuators are equipped with small but powerful microprocessors that make possible to introduce advanced features like remote parameterization and diagnostics. However, those features are normally not accessible from the top-level fieldbus infrastructure.

IO-Link, the new bi-directional, digital, point-to-point communication standard (IEC 61131-9), offers a standardized mapping of advanced sensor and actuator features into the control engineering tool environment.

Our IO-Link device software stack gives sensor and actuator manufacturers a cost efficient and easy way to integrate state-of-the-art IO-Link technology into their products.

Specifications
- Compliant with latest IO-Link communication specification
- Synchronous or asynchronous process data handling
- ISDU support
- Data storage
- Parameter handler
- Process synchronisation
- Footprint: RAM ~0.4 kB / Flash ~8-10 kB
- System load: ~50% on 8-Bit processor @ 16MHz
- Porting to different µCs and IO-Link PHYs requires only an exchange of drivers

Currently available drivers:

<table>
<thead>
<tr>
<th>Microcontroller</th>
<th>PHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATmega64/324/328</td>
<td>CCE4501</td>
</tr>
<tr>
<td>ATtiny</td>
<td>HMT7742</td>
</tr>
<tr>
<td>PIC32Mxxxx</td>
<td>LT3669-2</td>
</tr>
<tr>
<td>LPC11xx</td>
<td>MAX14820</td>
</tr>
<tr>
<td>RL78/xxx</td>
<td>MAX14821</td>
</tr>
<tr>
<td>C8051F31x/33x/37x/39x</td>
<td>L6362A</td>
</tr>
<tr>
<td>EFM32</td>
<td>SN65HVD101</td>
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<tr>
<td>STM32</td>
<td>ZIP12401</td>
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<tr>
<td>STM8L/STM8S</td>
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<tr>
<td>ATSAM3S</td>
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<td>MSP430</td>
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<tr>
<td>Kinetis K02/K60</td>
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Designed and manufactured by TEConcept GmbH
License model
- Royalty-free license based on number of Device IDs
- One-year maintenance included
- Full source code

Deliverables
- Fully ported stack operational on the target hardware platform
- Driver for target processor architecture
- Driver for target IO-Link PHY
- IO-Link demo application
- Compiler and linker setups for target development environment
- IO-Link device stack API reference manual, installation guideline and tutorial

Additional Services
- IO-Link consulting and additional technical support
- Customized IODD development
- Hardware and Software design for masters and devices
- Supply of development tools like
  - USB master (1-port, 4-port)
  - Conformance Test systems
  - IODD-Design tool
  - Reference designs