



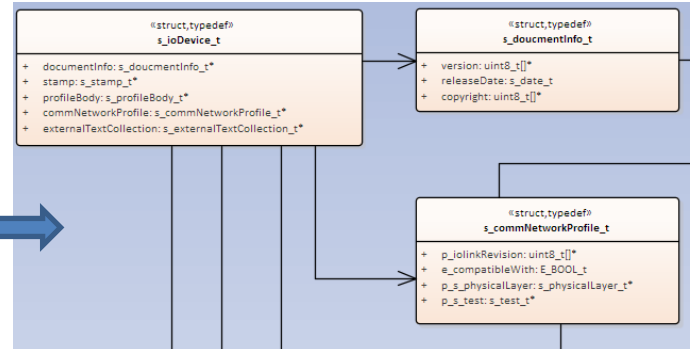
Use IO-Link IODD Parser

Universal · Smart · Easy

```

<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns="http://www.io-link.com/IODD/2010/10" xmlns:x:
<xsd:include schemaLocation="IODD-Primitives1.1.xsd"/>
<xsd:include schemaLocation="IODD-Datatypes1.1.xsd"/>
<xsd:include schemaLocation="IODD-Variables1.1.xsd"/>
<xsd:include schemaLocation="IODD-Events1.1.xsd"/>
<xsd:element name="IODDStandardDefinitions" type="IODDStand
  <!-- unique, key -->
  <xsd:unique name="Variable_Index">
    <xsd:selector xpath="//iodd:Variable"/>
    <xsd:field xpath="@index"/>
  </xsd:unique>
  <xsd:key name="Variable_Id">
    <xsd:selector xpath="//iodd:Variable"/>
    <xsd:field xpath="@id"/>

```



Overview

IO-Link devices need to be described by IO-Link Device Descriptions called "IODD". These IODD are complex structured XML files. In order to use the information given in an IODD, it is necessary to parse the IODD text file and to convert it into a hierarchical memory model layout. These IODD parsers are typically included within engineering tools running on an PC that allow parameterization and configuration of IO-Link Devices.

However, there are use cases where it is beneficial to have the respective memory layout available in an embedded system that is directly linked to an IO-Link Master.

One use case is a web server that is implemented in an IO-Link Master hardware. An IODD parser allows to integrate an embedded web server that provides access to parameters, events, system commands etc. of any Device that is connected to the IO-Link master after having parsed the corresponding IODD.

TEConcept has developed an IODD Parser that is suitable to be integrated in embedded systems. It is designed to make very efficient use of embedded memory and it has been tested with a big amount of IODDs of different Devices.

Deliverables

- C-source code
- API description
- Test report

IODD Parser Features

- Complies to IO-Link Interface Specification V1.1.2 / V1.1.3
- Complies to current IODD-specification (V1.1) and V1.0 (August 2011)
- IODD import as text-file (string, stream)
- Average parsed IODD size = 20kByte
- Max parsed IODD size (CLUETEC Server, April 2018) 100 kByte
- Simple user API
- Memory model organized as linked tree structure
- Programming language "C"
- Suitable for embedded Systems

Advantages

- Support Design of "intelligent" IO-Link Masters
- Efficient memory usage
- Error checking included
- Simple to use API