JSON Integration for IO-Link

Overview

One of the significant challenges of IoT- and cloud-based systems is the specification of a secure and straightforward communication interface with industrial field devices.

The fact that most modern automation systems can communicate via TCP/IP and HTTP provided the motivation for the IO-Link Consortium to create a standardized JSON- based communication specification for IO-Link.

The integration provides a device data model, objects, and semantics for mapping the IO-Link system into IT relevant connections and services. This includes a standard REST API based for:

- Data access for IO-Link Master/Ports/Devices
- IODD management
- MQTT client configuration

Advantages

- Easy integration to any JSON based client such as PDCTs, HMI, etc.
- Easy integration to Node-RED and Cloud systems
- Convenient means for diagnostics and parameterization
- Possibility for web-based supervision of the IO-Link system

License model

- NRE based, royalty-free license
- One-year maintenance included
- Full source code transfer
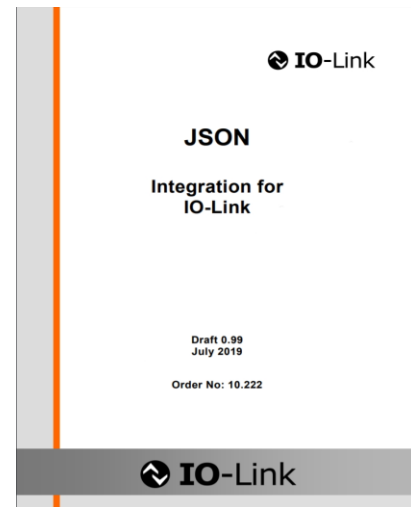
Requirements

- V1.1.3 IO-Link Master stack (with SMI interface)
- RTOS or Linux/Windows operating system
- Ethernet connection using a TCP/IP stack
- ARM Cortex M4, M7 controller, or any system which can run Linux or Windows.
- Moderate memory requirements suitable for Cortex-M-based processor platforms

Deliverables

- JSON Integration for IO-Link module source code, written in ANSI C (can be compiled on embedded platforms and also on Linux/Windows-based systems)
- Web server using sockets (if supported)
- Integrated IODD parser
- Demo application
- JSON API documentation