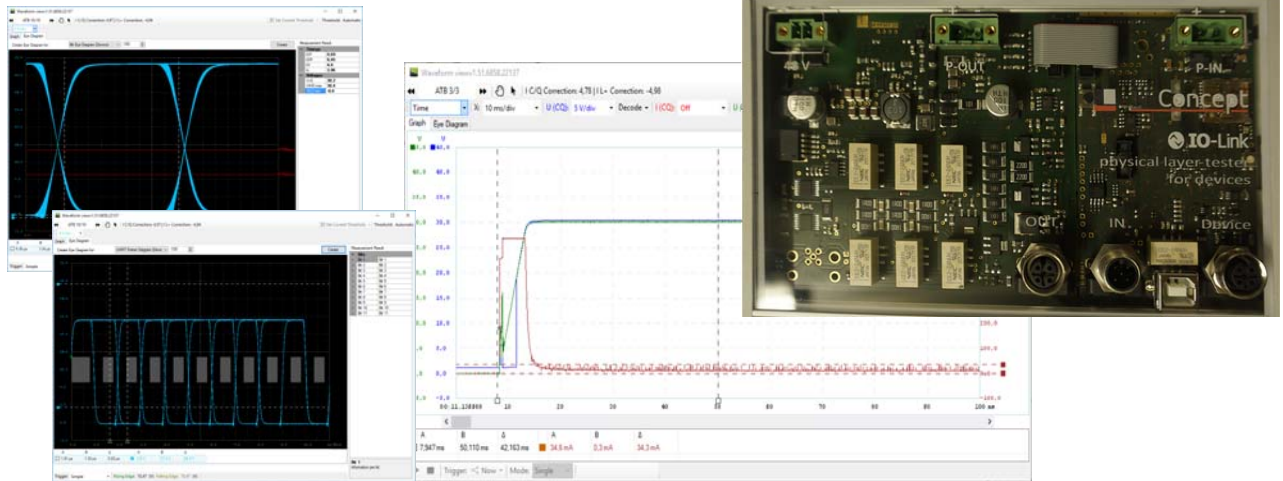




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Physical Layer Tester



Overview

TEConcept has developed a Physical Layer Tester "PLT" for Devices for execution of the Physical Layer Tests according to the IO-Link Test Specification. The Physical Layer Tester is powered by an external 48V power supply, it is controlled via an USB port and it offers a standard M12 connector to connect the Devices under test "DUT". A PC-software tool asks for the IODD of the DUT and automatically adjusts most of its test procedures parameters according to the capabilities of the DUT. The test cases are defined by an XML-files that are accessible by the user.

Functional Description

The PLT is based on a high-speed multi-channel A/D converter that measures voltages and currents on both the C/Q and the L+ line. For every test case, specific snapshot of signals are taken and stored. In order to generate these signals, the PLT includes all necessary elements, like an IO-Link Master, adjustable voltage and current sources, line simulations and so forth.

These snapshots are visualized in an oscilloscope-like view. They are mostly analyzed in a semiautomatic way where measurements are taken by moving graphical cursors that are linked with voltage and current values. The evaluated values are entered / copied into predefined fields and used for a automatically generated test reports.

Physical Layer Tester Features

- Compliant to IO-Link Test Specification V1.1.2
- User calibration support
- IODD support
- Integrated IO-Link Master
- Integrated Line Simulation
- Semiautomatic measurement procedure based on recorded waveforms
- SIO – Mode tests supported
- BIT – and UART Eye-Diagrams
- Test Report Generation (PDF)
- All test results are stored in a reloadable test data file

Advantages

- All components to run physical Layer Tests are included
- Substantial reduction of test effort and test duration
- Automatic test report generation

Deliverables

- IO-Link Physical Layer Tester
- 48V power supply, USB cable
- Connector Cables
- Windows-based graphical user interface