



NTOnTrack

NTOnTrack TRDP Conformance Test: Test of End Device conformity to IEC 61375-2-8

NTOnTrack TRDP Conformance Test

The NTOnTrack Conformance Test is dedicated for End Devices using TRDP as a communication protocol within the Train Communication Network (TCN) according to IEC 61375-2-8.

The Conformance Test shall verify that the implementation/integration of a TRDP protocol stack into a custom device is realized in a way that the specific device behaves in conformance with the above standard.

It includes checks of Transport Layer, PD/MD communication patterns, addressing, PD/MD-PDUs, topography counters and reaction to faults.

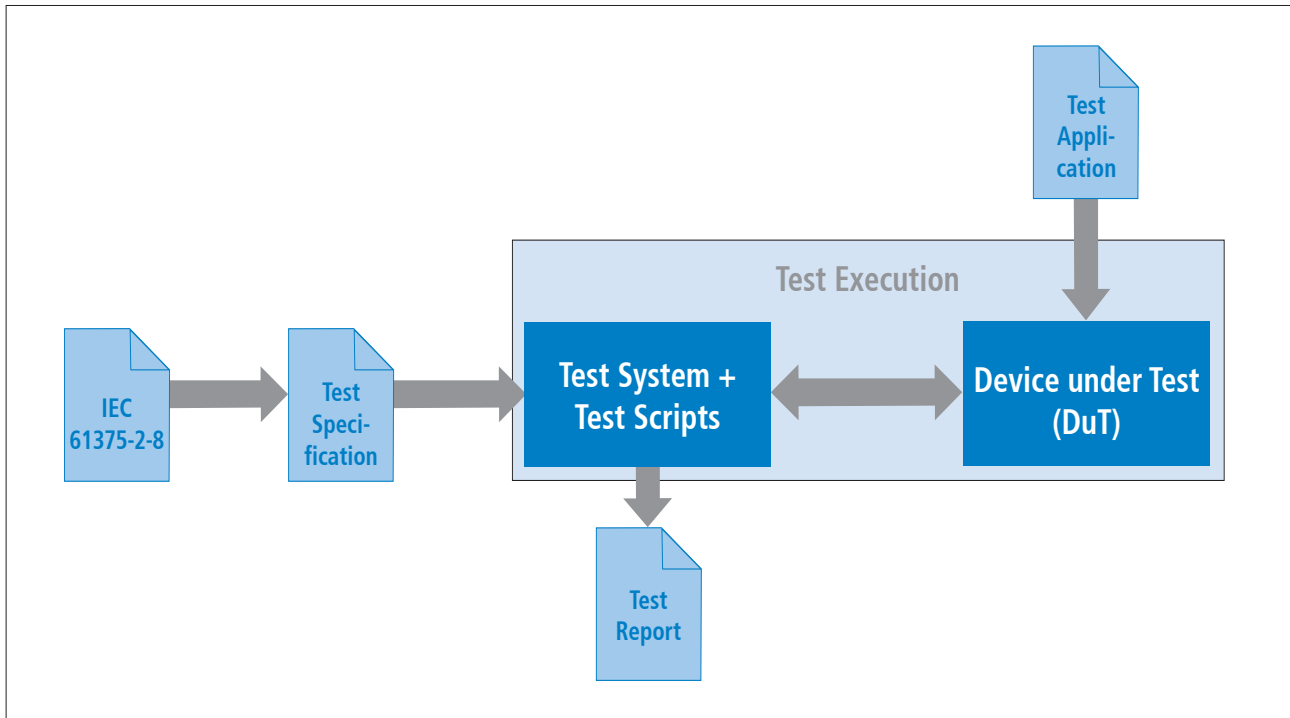
A detailed conformance "Test Specification" is the basis for the "Test System" running the "Test Scripts". They interact with the "Test Application" implemented on the "Device under Test" (DuT).

The final Test Report then states the conformance.

Customer benefits

- Reliable, reproducible testing of different End Devices (regardless of the operating systems) for TRDP implementation as specified in IEC 61375-2-8
- TCNOpen independent validation of the protocol implementation
- Individual set of test cases (PICS related)

Test procedure



More details

The conformance tests are executed on the test system and stimulate and check the DuT. Therefore a provided "Test Application" is executed on the DuT to respond to the test system commands.

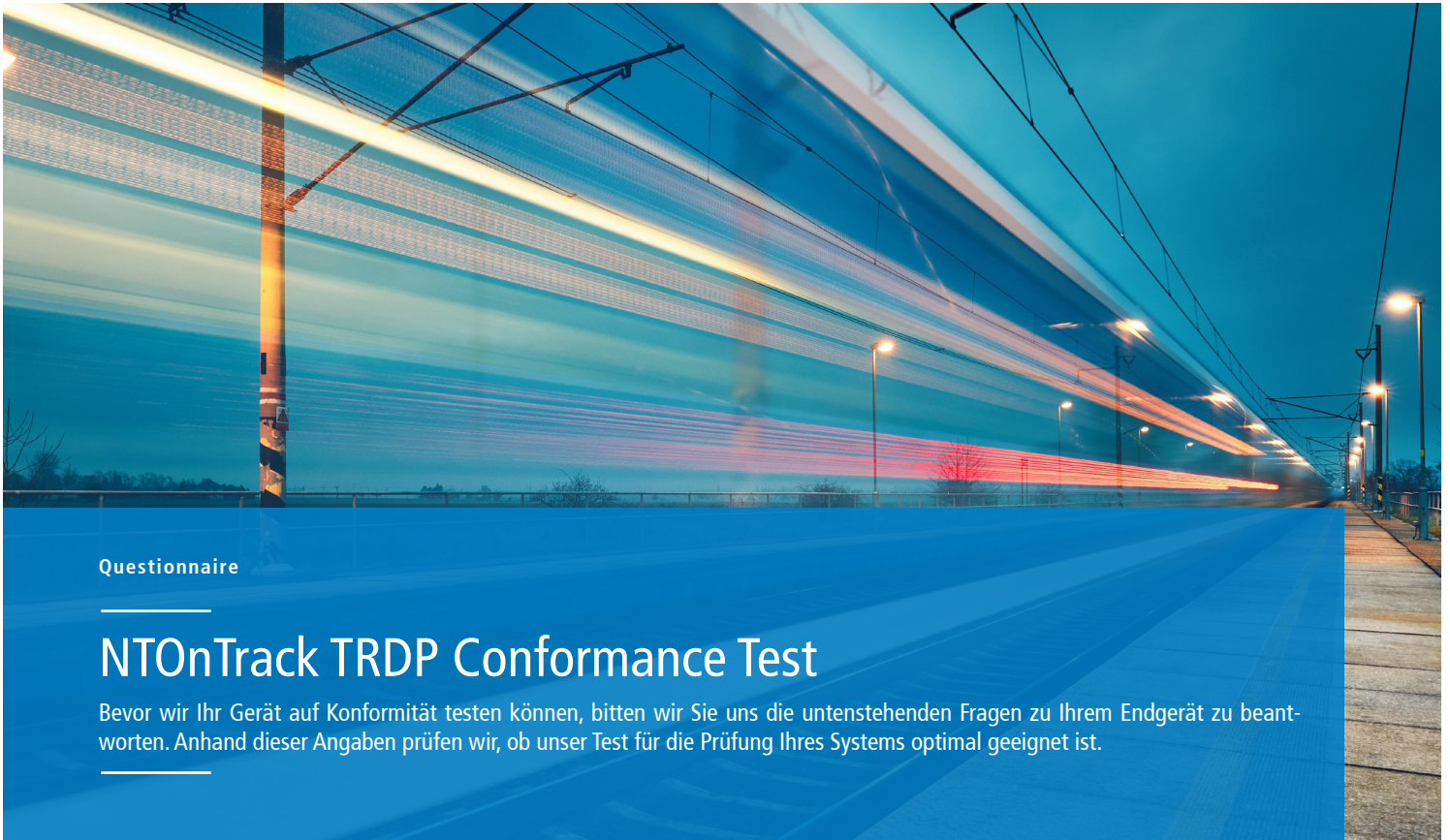
The DuT "Test Application" is a container of the different test cases which are developed in the programming language C. They can easily be linked to the DuT TRDP implementation.

The PICS proforma determines which features are supported by the DuT and which category of tests will be executed.

Scope of Services

- Detailed Conformance Test specification including fault injection
- Conformance Test Report
- PICS proforma template
- 'C'-Source of Test Application for Device under Test (DuT)
- Test Execution with DuT in a test environment independent of the TCN Open TRDP Stack
- Support of test iterations





Questionnaire

NTOnTrack TRDP Conformance Test

Bevor wir Ihr Gerät auf Konformität testen können, bitten wir Sie uns die untenstehenden Fragen zu Ihrem Endgerät zu beantworten. Anhand dieser Angaben prüfen wir, ob unser Test für die Prüfung Ihres Systems optimal geeignet ist.

**Which operating system does your device use?
What version?**

e.g. vxWorks 5.1, 32Bit

**CPU type, where the test application will run?
What clock rate? Available program & data memory?**

e.g. PPC405, 300MHz, 128MB/32MB

**Which TRDP stack do you use?
What version? Special options set?**

e.g. TCNOpen TRDP V2.0.2, HIGH_PERF

**What is the End Device class conform
to EN 61375-3-4:2014 4.2.3 (End Device classes)**

e.g. Consist Local, Train Communication, Train Topology aware

**Does your device support
additional TCP/IP connections?** Yes No

**Does your device support multiple
tasks/threads
(incl. mutex/semaphores)?** Yes No

**If not using TCNOpen, does your TRDP API
support the service primitives defined in
Table A.4 of DIN EN 61375-2-3:2017-02
(PD support)?** Yes No

**If not using TCNOpen and MD support
needed, does your TRDP API support
the service primitives defined in
Table A.19 of DIN EN 61375-2-3:2017-02?
(For Message Data support only)** Yes No

**If not using TCNOpen under POSIX, can
your OS support all the functions listed
on page 2 of this file?** Yes No

Test procedure

