



Systematic und automated analysis of measured data

As part of the development and operation of embedded systems, the ability to record measurements with different tools is intensively utilized in order to gain insight both into internal processes of single components of the embedded system and into the communication amongst the components. For the evaluation of the measured data the following questions arise:

- How can the system properties that need to be validated, be specified concisely, intuitively and be reusable?
- How can system properties in large amounts of data be validated automatically?
- How can various recordings be used and evaluated together?

Key features

TRACE-CHECK is a trace analysis software for validation of embedded systems.

- ✓ Supports a broad range of established recording formats
- ✓ High reusability of analyses through generic description
- ✓ Intuitive graphic user interface
- ✓ Simple specification of real-time features by means of logic and Python
- ✓ Clear display of results
- ✓ Seamless integration into the test automation software ECU-TEST

Area of application

TRACE-CHECK is used for the design, implementation, execution and evaluation of trace analyses, including the creation of intuitive test reports. With TRACE-CHECK trace analysis becomes an integral part of manual and automated test execution. Direct access to ECU-TEST allows the integration of trace analyses directly at the required position in the tests. Furthermore, as a stand-alone tool TRACE-CHECK enables the performance of trace analyses of any measured data that has not been generated in an automated test run.

Benefits

Usability

The user friendly graphic interface allows the efficient creation and execution of trace analyses with minimal training effort.

Reusability

Already created trace analyses can be parameterized and structured. Due to a generic analysis description the created analyses can be used independently from the specific hardware and software and are therefore reusable to a great extent.

Modularity

To guarantee the reusability of created analyses, each one is made up of individual building blocks or modules in TRACE-CHECK:

- **Traces** are recordings of measured data in any supported format.
- **Generic signals** are identifiers for the analyzed variables that are associated with specific signals from traces.
- **Trace step templates** are generic analysis modules that respectively process generic signals and enclose a concrete analysis method.
- **TRACE-CHECK packages** combine generic signals and parameterized trace step templates into a single executable analysis unit.
- Various TRACE-CHECK packages can be combined into **projects**. In that way the efficient sequential execution of selected analyses is enabled.

Supported trace formats

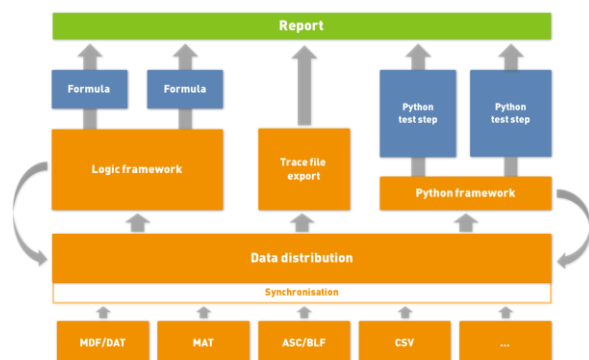
- MDF (Vector, ETAS and others)
- MAT (MATLAB/Simulink, ControlDesk)
- CSV
- ASC/BLF (by use of DCB- and FIBEX-bus data bases)

Trace step templates

Central modules of an analysis are the trace step templates. They define what needs to be analyzed. The user can choose between two fundamental types of trace step templates:

- With **logic based trace step templates** the user comfortably defines formal specifications that need to be complied by the chosen signals.
- With **python based trace step templates** the user can program the analytical specifications him or herself. In doing so the user can concentrate on the actual requirements, since many tasks – from reading of the traces to the creation of report entries – are carried out fully automated by TRACE-CHECK.

Functionality

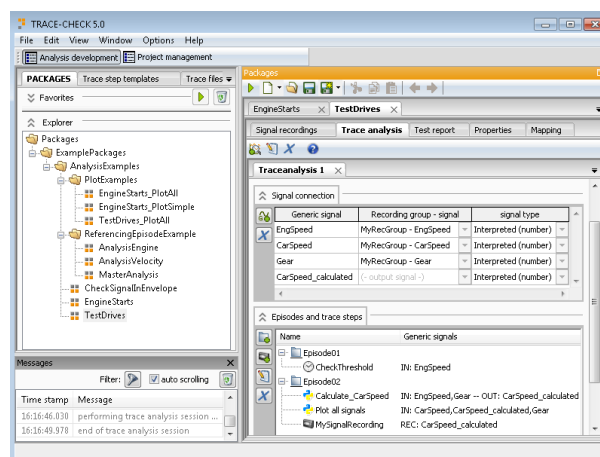


TRACE-CHECK is designed to efficiently process large traces. During configuration of the analysis the user chooses suitable trace step templates and specifies to which signals they have to relate. Throughout the execution of the analysis the traces will not be loaded as a whole into the main storage but all required signals are read out live and distributed to the parameterized trace step templates.

User interface

The user interface is divided into the following areas:

- trace file explorer
- trace step templates library
- package explorer
- editor for analysis packages for signal integration, selection of trace step templates and their parameterization
- project management for efficient management and sequential execution of created analysis packages



Service and support

In addition to phone and e-mail support, TraceTronic offers training courses for test engineers. We will be pleased to help you with the integration of TRACE-CHECK in established process chains as well as in the setup of solutions for testing and securing your control unit functions.

On a project basis, TraceTronic carries out special adjustments and integration of further software (e. g. test management tools) and formats in TRACE-CHECK.

Products

TRACE-CHECK

Complete scope consisting of editor, runtime engine and user manual.

TRACE-CHECK module for ECU-TEST

Seamless integration of the complete function set of TRACE-CHECK into the test automation solution ECU-TEST.