What is "T1 for POSIX"?

T1 version 3.2 introduced the support of POSIX operating systems through the add-on product **T1.posix** as an extension to T1.timing. Many operating systems for high-performance computing as well as the AUTOSAR AP standard are based on POSIX.

## Key benefits of using T1 for the analysis of POSIX based systems

Live streaming of scheduling data from the target ECU
The T1-TARGET-SW traces at run-time and transmits the trace data via Ethernet to the T1-HOST-SW. T1.timing in combination with T1.streaming and T1.posix offers the following benefits:
- Traces of arbitrary lengths
- The analysis and trace data visualization takes place simultaneously to streaming/recording data from the target ECU
- Higher resource efficiency due to avoidance of costly file accesses

T1 addresses the needs of the automotive industry by supporting
- Combined and synchronized tracing of AUTOSAR CP/AP ECUs networks
- Synchronized visualization and analysis of both system types in parallel and in the same view
- Visualization of AUTOSAR Deterministic Client Cycles
- Well-known timing results (e.g. CET, DT, RT, …)
- Event chains (host-side)
- Constraints (host-side)
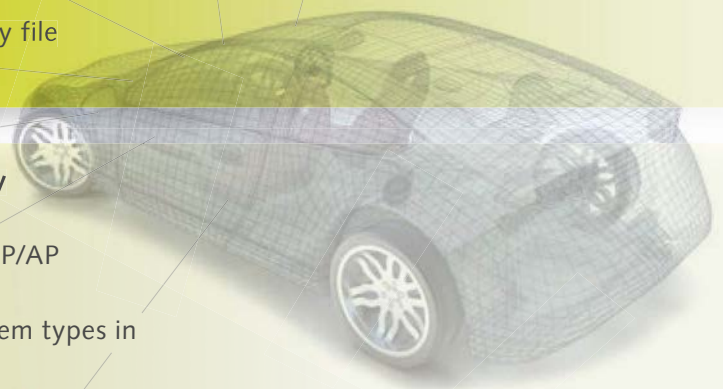
Unique advantages of the T1 Timing suite compared to other solutions

- **Huge benefit in total cost** of ownership because of single tooling for AUTOSAR CP/AP ECUs networks
- **No need to learn new tools** since T1 is widely established in the automotive industry
- **One intuitive GUI** covers all functionalities of T1.timing, T1.streaming and T1.posix
- Flexible extension of T1 according to **customer specific needs** through dedicated engineering projects
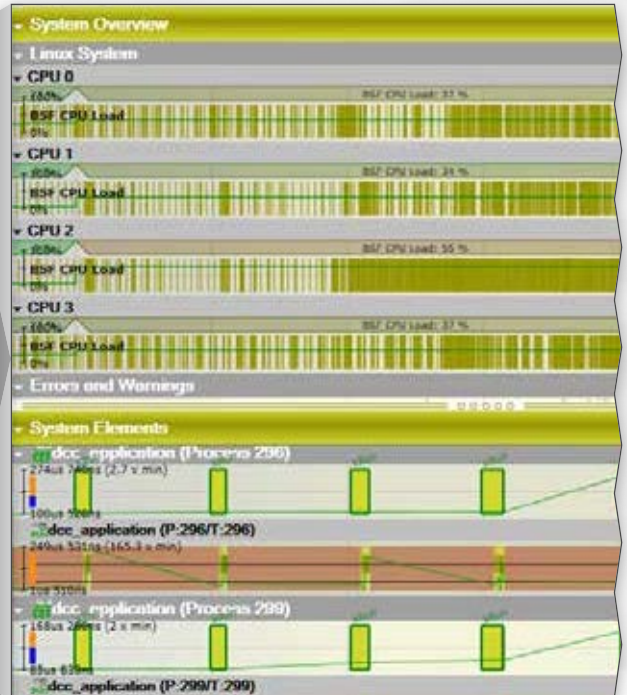- Single point of contact for all questions around timing and resource analysis

Features of T1.timing V3.2 with add-on product T1.posix

...detailed state information

Live streaming of scheduling data - zoom in to see...

ZOOM IN

Graph view: CPU-load, CETs, RTs, DTs, etc.

Detailed view: colors indicating states of Processes and Threads over time

Technical data

Supported target operating systems:
- QNX
- Linux
- Further operating systems will be supported in the future or upon reques

Supported target communication interface:
- Ethernet 100/1000

Requirements regarding the host PC:
- Intel i7 or comparable CPU
- GPU
- SSD drive
- 16GB RAM

Features released summer 2020

- Synchronized AP/CP traces
- Host-side constraints
- Host-side event-chains
- Reports generation
- Memory information related to processes/ threads
- Message flow analysis (e.g. for QNX)

Requirement for synchronized traces:
- Common (accessible) time-base on all relevant ECUs
- T1 integrated on all relevant ECUs