# TraceBox -

The easy way of validating motor control software.



In the early phase of software development, **tests on real hardware** can reveal unexpected errors. However, due to the high setup effort, in most cases the software is only tested with simulators. The TraceBox is a versatile data acquisition and communication **tool for the development and validation of motor control** (MCTRL) **software** that can be used in conjunction with real target hardware.





Fast & flexible error analysis

High connectivity

Plug & Play

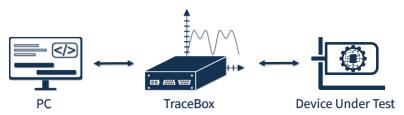




Suitable for different targets

### Setup

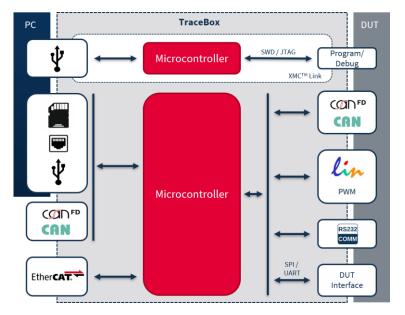
The TraceBox is connected between the PC and the device under test (DUT). Setup the needed interface via plug & play and control the device with the user-friendly PC tools.



## **Your benefits**

- Verification of MCTRL algorithms & signal analysis
- Identification of issues throughout the entire development phase
- Validation of software adaptions in the ongoing development process
- Direct implementation in the installed, application-oriented state
- One standard device for various use cases

#### **Block diagram**



## Key applications

- MCTRL real time data tracing of DUT
- High level communication with DUT
- Timing measurements
- State change monitoring
- Scan for sporadic software errors

#### **Key features**

- Data streaming via SPI/UART optimized for low cost microcontroller (e.g. Infineon TLE987x)
- Target communication with various application protocols and interfaces (LIN, CAN FD, RS232)
- Flashing and debugging via SWD (XMC<sup>™</sup> Link functionality)
- Time synchronization via EtherCAT in embedded test environments



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