TraceBox

A versatile data acquisition and communication tool

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 software** that can be used in conjunction with real target hardware.

Width: 186.5 mm
Length: 177.0 mm
Height: 61.5 mm

One device for various use cases:

Identification of issues throughout the entire development phase

The early identification of issues is crucial to reduce development costs and maintain the project schedule. The TraceBox is a tool to identify issues with minimal effort. Flash and debug your motor control software with the integrated XMC™ Link without disconnecting and re-connecting the device under test (DUT).

Verification of motor control algorithms & signal analysis

Data streaming via SPI/UART optimized for low cost microcontrollers (e.g. Infineon TLE987x) enables you to verify your motor control algorithms by tracing the microcontroller internal data while the motor is running.

Validation of software adaptions in the ongoing development process

Software validation is a complex procedure that can be time-consuming due to the various settings of your motor control software. The TraceBox allows an in-depth analysis of the functionality of software adjustments. Change your motor control parameters and validate the system behavior in real time. No re-flashing required.

Direct implementation in the installed, application-oriented state

Based on the high connectivity and plug & play principle, the TraceBox can be used as a standalone device as part of a desktop developer setup as well as embedded in a test bench environment.


PC   TraceBox   Device Under Test
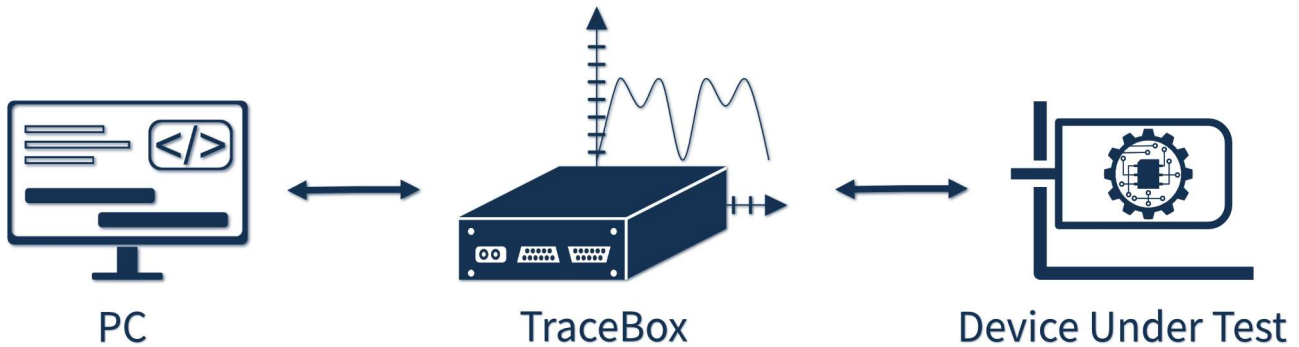
Key applications

- Motor control real time data tracing
- 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 the DUT via SWD (XMC™ Link functionality)
- Time synchronization via EtherCAT in embedded test environments

Block diagram
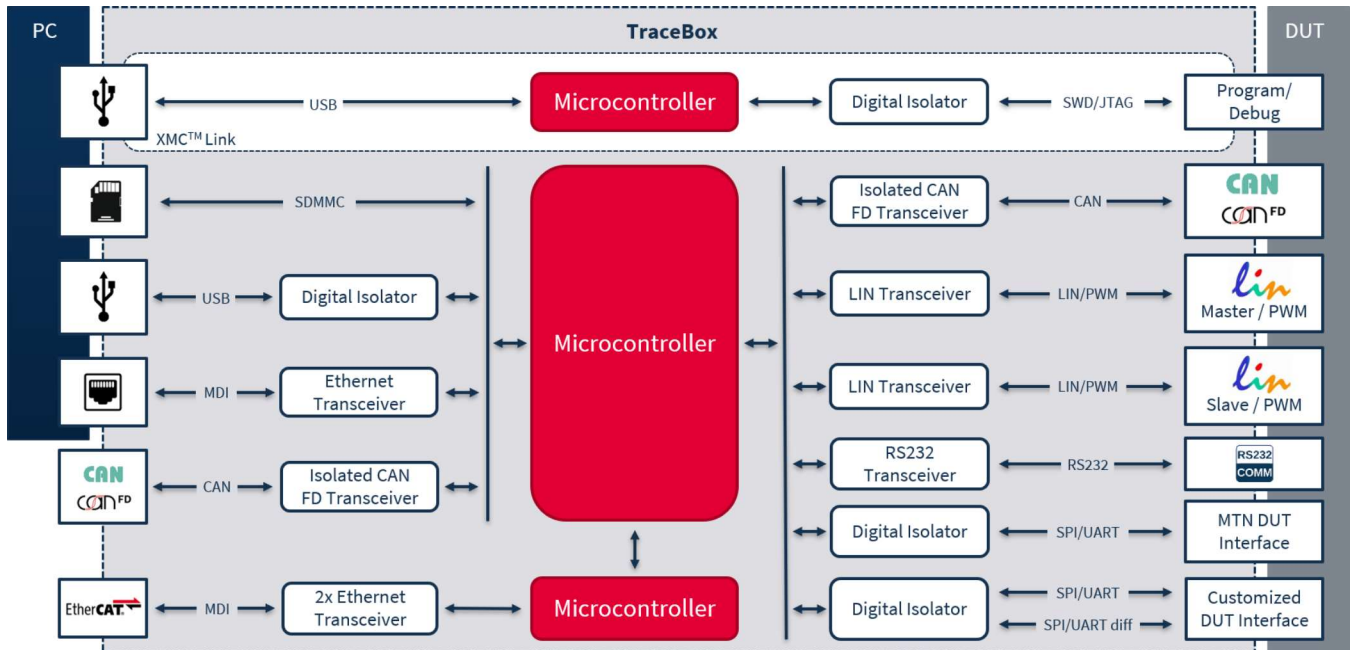
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