

Features

Supports C and C++ source code

Automated code instrumentation supports easy achievement of Code Coverage (including MC/DC)

Assisted harnessing eases testing

MxSuite has a TUV SUD approved tool qualification kit for ISO 26262 process requirements

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MxSuite™ PiL Connector, Processor-in-the-Loop Solution

The MxSuite PiL Connector offers an ideal environment for performing Processor-in-the-Loop (PiL) testing with an easy connection to in-circuit debuggers. It provides all the benefits of the MxSuite Embedded Software Test environment, including automation, reports, pass/fail assessments, graphic test presentation/editing, test portability, and ALM integration. Mx-Net, the data streaming component of MxSuite, provides the communication interface to the hardware.

PiL Connector Benefits

- ✓ The software being tested is built into an executable using the target compiler/linker and executes on the target processor.
- ✓ Using the PiL connector with MxSuite supports these ISO 26262 requirements:
 - Test as close to the target environment as possible
 - Measure code coverage up to the level of MC/DC
- ✓ Valuable timing information can be acquired when testing on the target processor. Timing information gathered on a host computer is generally not useful.
- ✓ Tool chain or potential code portability issues can be detected earlier.
- ✓ SiL and MiL test cases can be easily and automatically reused for PiL testing, reducing the need to deploy debuggers to every developer.

What is PiL testing?

PiL testing validates the behavior of software on the target processor using production-intent build tools. In contrast, SiL testing is typically performed on a host development PC using a different processor.

Normally, PiL testing uses an emulator or debugger and does not require additional bench test equipment that manipulates and measures the state of the processor's I/O ports.

PiL testing is important for development processes implementing safety critical systems. Unit or feature testing models or code compiled for a host PC has limitations. The only way to know how it will behave is to execute and test on the target processor.

Lauterbach Support

The PiL Connector works with Lauterbach TRACE32 in simulator (ISS) and emulator mode.

Ask about support for additional emulators, such as iSystems, Keil, and more.

