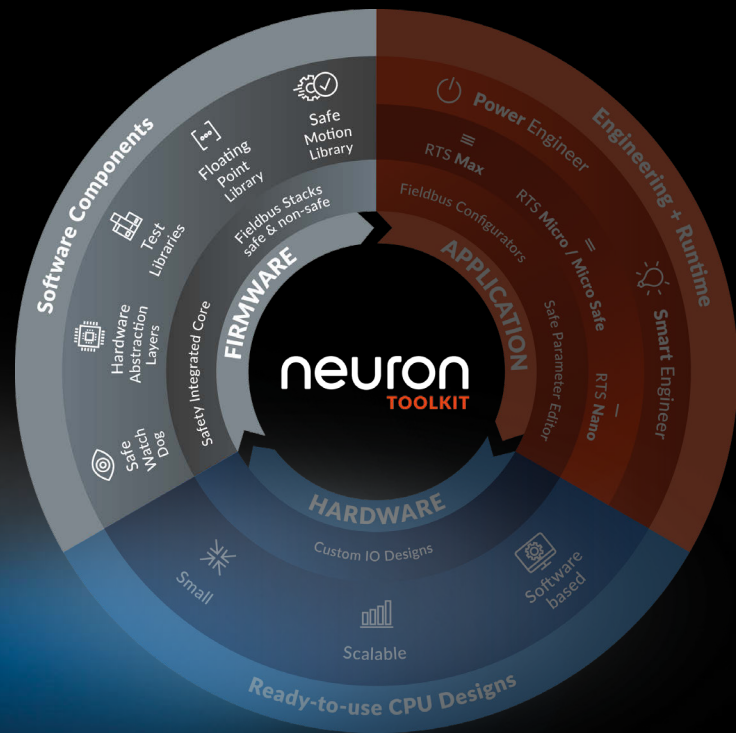


Test Library CORA



Summary

The Test Drive Library CORA is a tool to be used for realizing large parts of the hardware tests, which are necessary according to IEC61508. The test manager as the core of the library manages the configured tests and calls up the individual test functions. Thus, different memory blocks can be registered for the memory test, which are then processed by the test manager.

Main benefits at one glance

Typically, a March -C test is run when the system starts. At runtime, a segmented Galpat test is used, for highest possible test coverage (DC). For the ROM test, a table of checksums (CRC) by previously configured memory blocks in the non-variable memory (program memory) is applied to check the consistency at runtime.



On-target-testing



CPU-testing, RAM-testing, ROM-testing



Diagnostic function for monitoring the continuous test coverage



Verification and validation



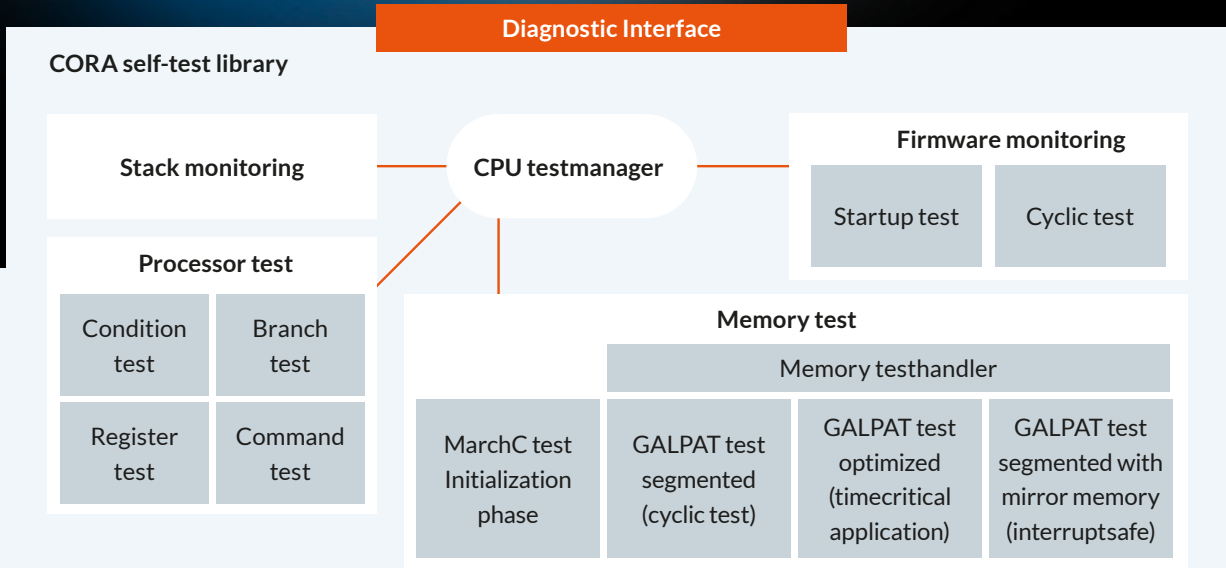
Pre-certified components toolkit

To ensure even in systems with short runtime that all memory areas were tested by n system startup, the test manager also administrates the most recent test segments. In addition, a diagnostic function exists for monitoring the continuous test coverage. The library is suitable for use in real-time environments. It requires no operating system

The provided functions are pre-certified by TÜV Rheinland and can be used in safety projects. Delivered as source code. An integration guide is attached. Optionally, all unit tests for your own extensions

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Architecture



Specifications

CPU test (DCCortex M3 = medium, DCARM = medium)	Block CRC table
RAM test (DCGalpat = high, DCMarchC = medium)	Firmware monitoring (consistency check, DC = high)
Segmented Galpat, March C	Stack monitoring against overflow and underflow (DC = high)
Galpat test with mirror memory, optimized Galpat	Configurable test manager
ROM test	