



# Competence in Safety

The faster way to your safety compliant product

CELL 1		1	0	1	1	0	0	1	1
CELL 2		0	0	1	0	1	0	1	0
CELL 3		1	0	0	0	1	0	1	1
XOR		0	0	0	1	0	0	1	0

IEC 61508

CPU TEST RAM TEST ROM TEST STACK TEST

Speed boost for your development process

## ISH Testlibrary CORA

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.

### Feasible Tests

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

## ISH Testlibrary CORA <sup>■</sup>

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.

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.

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.

**Currently, the following processor types are supported:**

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ARM7

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ARM9

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Cortex M

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Cortex A (with restrictions)

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*Further types of controllers and families on request.*

We also offer training courses for a quick start into your project. Even with the further specification and integration, we are pleased to advise you. As an expert in the development of safety-related electronic products according to DIN EN ISO 13849, DIN EN 62061 and IEC 61508, we support you in all stages of development of your product and accompany you up to the examinations and tests.

For a short-term project start we also offer safety evaluation hardware with variable fieldbus-interface.