# Safe Fieldbus Wrapper IP Design Package

Overview

The Safe Fieldbus Wrapper IP Design Package allows a generic communication interface between safe fieldbus stacks and a safety product software application. The specific safe fieldbus data is converted in an abstraction layer. So diverse safety stacks can be implemented without changing the product safety software application interface. This is useful for products with Multiprotocol Safety Stack implementation like PROFISAFE, FSoE, CC-Link Safety.
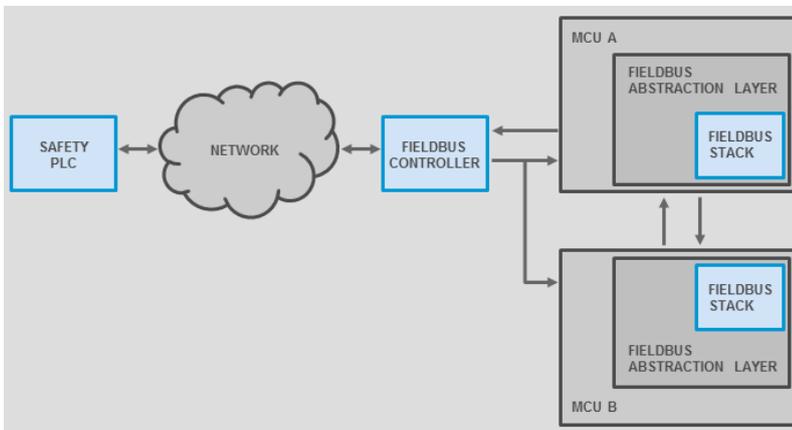

Technical Description

The Black Channel communication content of a certain safety related industrial network is network specific. If different fieldbus systems are supported, the interface to the product application software needs to be adapted accordingly.

The Safe Fieldbus Wrapper Design Package builds a safety abstraction layer to get a fieldbus independent interface to the product application software. It offers clear software interfaces, is encapsulated and tested.

- Generic solution to integrate different safe fieldbus stacks
- Ready to use handling of stack specific application integration
- Packing/unpacking of safe application data to/from a Black Channel

Your Benefits

- Design Package useable for SIL3 related projects
- Reduced development risk through reuse
- Cost and risk reduction of the project
- Shorter time-to-market through effort reduction
- Easier product certification due to IEC based documentation
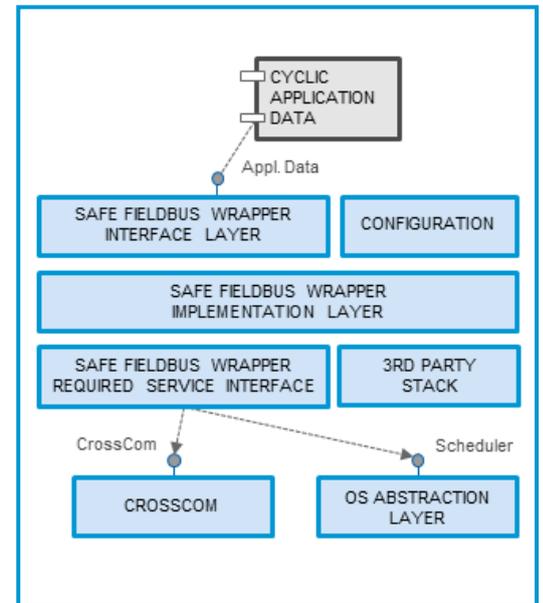
Safe Fieldbus Wrapper Layer Overview

Delivery Content

- SW design description as Polarion Tool content
- Source code IEC 61508 compliant, C99 MISRA-C 2012, designed and optimized for STM 32-Bit microcontroller
- Test documentation: test cases and test reports as Tessy Tool content
- Code documentation as Doxygen Tool content
- Static code analysis results as PC Lint Tool content
- All documentation according to IEC 61508 standard

Software and hardware requirements

- 3rd party Safety Communication stack, e.g. PROFIsafe, FSoE
- Failure Handler (Interface)
- Established MCU/MCU communication like MESCO Design Package CrossCom IP library
- Scheduler to call functions