highintegritysystems

WITTENSTEIN

SAFERTOS® and NXP's S32K

SAFERTOS® is available for NXP's S32K1 and S32K3 Automotive qualified MCUs based on Arm® Cortex®-M cores. Make use of this highly integrated package for your safety critical application.

SAFERTOS®

SAFE**RTOS**® is a safety critical real time operating system that is used in automotive applications worldwide. It delivers superior performance and pre-certified dependability, whilst utilizing minimal resources.

SAFE**RTOS** is supplied as source code and accompanied by a Design Assurance Pack (DAP). The DAP contains all the design and verification artefacts required to support the standards ISO 26262 ASIL D -2,-6,-8. SAFE**RTOS** is delivered tailored to your specific processor/compiler combination, removing the need for retesting on the target hardware, and creating a smooth path to certifying SAFE**RTOS** integrated within a product. The DAP ensures:

- No retesting on target hardware is required;
- Easy installation and integration into your development environment;
- Reduced development costs and improved time to market;
- Smooth path to certifying SAFE**RTOS** within an application.

The S32K Family

The S32K family provides a scalable platform of low-power MCUs with advanced safety, security, and software support for ASIL B/D body, zone control and electrification applications. All MCUs are supported by a minimum of 15 years product longevity and a comprehensive NXP and 3rd party software and tools ecosystem.

S32K MCUs offer hardware and software scalability and compatibility with support for firmware over-the-air (FOTA) updates, advanced hardware security, CAN FD, and Ethernet TSN.

The S32K1 family is based on the Arm Cortex-M0+/M4F cores. It includes single core MCUs with 128 KB to 2 MB, ASIL B safety support and 32-176 pin.

The S32K3 family is based on the Arm Cortex-M7 core. It includes single, dual, triple and lockstep core MCUs with 512 KB to 8 MB, ASIL B/D safety support and 48-289 pin.

Key Features

SAFE**RTOS**® available pre-certified to ISO 26262 ASIL D

High Perfomance, Small Footprint

Fully Integrated, Demos Available

Upgrading from FreeRTOS to SAFERTOS

Some customers choose to start their development for free with FreeRTOS. The FreeRTOS kernel and SAFE**RTOS** share the same functional model, meaning that upgrading is easy. Many of our customers prototype using the FreeRTOS kernel, and convert to SAFE**RTOS** at the start of their formal development phase.

WHIS supply a manual that details how to upgrade from FreeRTOS to SAFE**RTOS** in easy steps.

SAFERTOS® and S32K

WHIS engineers port SAFE**RTOS** to the specifc S32K configuration requested by the customer. SAFE**RTOS** is delivered with the Design Assurance Pack, as well as a demo application that works straight "out of the box".

SAFE**RTOS** and S32K is a proven combination already performing out in the world. Talk to one of our sales advisors about your SAFE**RTOS** requirements today.

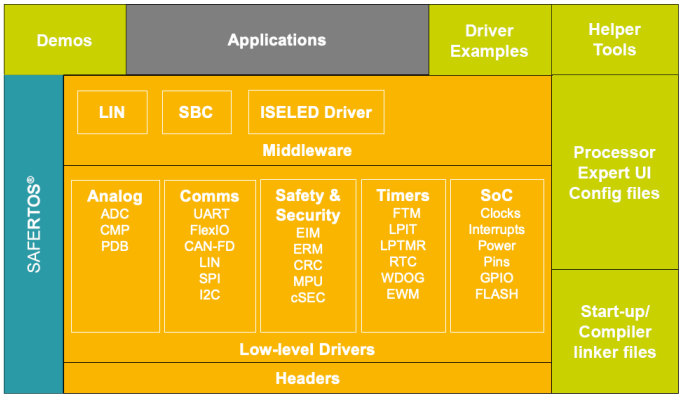

Figure *S32K SDK Block Diagram*

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