NEWS



CAST Expands Functional Safety Line with Additional Certified IP Cores

Certified design IP cores save automotive engineers substantial time and expense in developing Functional Safety conforming ASIC- and FPGA-based systems.

Woodcliff Lake, New Jersey — **June 5, 2025** — Semiconductor intellectual property core provider CAST has added new products to its already-strong line of Functional Safety certified design IP cores.

The Functional Safety (FuSa) standard governing automotive systems, ISO 26262, defines Automotive Safety Integrity Levels based on the severity, exposure, and controllability of a system or



The Functional Safety IP cores CAST provides conform to safety integrity levels from ASIL B to ASIL D and are suitable for a variety of automotive subsystems.

component. These range from ASIL A for the lowest risk — e.g., infotainment — through ASIL D for the greatest risk — e.g., anti-lock braking.

The new ASIL-ready certified cores are:

- **SCR** Smart Card Reader ASIL B,
- EMAC-1G Gigabit Ethernet Media Access Controller ASIL D, and
- **xSPI-MC** xSPI, HyperBus[™], and Xccela[™] Serial Memory Controller ASIL B through ASIL D depending on its configuration.

Their certification has been awarded by the independent testing lab <u>SGS-TÜV Saar</u>, which performs a stringent audit of each core's safety approach, architecture, and documentation. The core's ASIL designation reflects conformance to the specific assurance level's target values for single-point failures and latent failures. On the hardware architecture level, this typically requires the use of double or triple modular redundancy and error correction codes. The required FuSa documentation includes the Failure Mode, Effects, and Diagnostic Analysis (FMEDA) and a Safety Manual.

As with all ASIL or ASIL-ready certified cores, the standard considers each core to be a *Safety Element out of Context* (SEooC), meaning it is designed for use in a safetyrelated system, but developed independently of the final system context. System developers thus remain responsible for the safety certification of the entire system in which the core is integrated. The certified cores CAST provides, however, yield substantial savings in system certification: at the core level, they eliminate the challenge of building in the necessary safety features, the effort to produce the required documentation, and the cost and delay needed for testing lab certification.

"The FuSa-certified cores we offer have saved multiple customers countless hours of expert-level work by being designed correctly and including all the deliverables needed to support the ASIL certification of their automotive systems," said Nikos Zervas, CAST CEO. "We are pleased to satisfy customer requests for these three additional FuSa cores, and we have several additional certifications underway."

The newly certified cores join CAST's offering of one of the industry's broadest ranges of certified FuSa cores, including these ASIL D level cores:

- RISC-V 32-bit Embedded Functional Safety Processor,
- CAN CC, CAN FD, and CAN XL Bus Controller,
- LIN Bus Master/Slave Controller,
- Low-Latency 10/100/1000 Ethernet MAC, and
- Serial Peripheral Interface SafeSPI Controller.

All ship with the necessary FuSa features and documentation. They are available for ASICs or FPGAs, have flexible licensing terms — including royalty-free — and feature industry-leading customer support before and after each purchase. Learn more by <u>contacting CAST sales</u> or visiting the <u>CAST Functional Safety overview</u>.

About CAST

Computer Aided Software Technologies, Inc. (CAST) is a digital silicon IP provider founded in 1993. The company's ASIC and FPGA IP cores product line includes microcontrollers and processors; compression engines for data, images, and video; interfaces for automotive, aerospace, and other applications; security primitives and comprehensive SoC security modules; and various common peripheral devices. Learn more by visiting www.cast-inc.com.

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