

Automotive ASIC Solutions

Socionext Enables the Evolution of Safe & Secure Automotive Systems



Automotive



Overview

With 40 years' experience, Socionext is one of the world's leading providers of Custom SoC (ASIC) solutions. For the automotive market, we provide fully-qualified digital and mixed-signal ASICs with support for functional safety (ASIL). We use automotive-grade CMOS process technologies from 180nm down to 7nm. While we can cover all aspects of the design process, from system architecture definition to chip implementation, we also offer flexible engagement models to fit your needs.

Socionext offers an extensive portfolio of silicon-proven IP to minimize development time and ensure the highest levels of quality. One of the highlights is custom ARM-based CPU platforms. We can support all your requirements, up to very complex multi-processor systems and lock-step designs utilizing a variety of bus systems, peripherals and high-speed interfaces. Socionext also offers an extensive range of analog macros, including data converters, power management functions and custom analog as well as RF-front-ends. Our data converter portfolio contains world-beating, high-speed ADCs and DACs with GS/s conversion rates.

Applications include

- Front View Camera
- ADAS Sensor
- 360° View Monitor
- HuD
- Rear Seat Entertainment
- Parking Assistant

Silicon proven Designs

Custom-designed CPU Platforms

High Speed interface IP
(MIPI, DDR, USB ..)

Automotive qualified CMOS Technologies

Custom Analog including High-speed
ADC/DACs, TDCs, PGAs ...

Custom RF-CMOS

Automotive Qualification & Optional Functional Safety



Why ASIC?

Differentiation

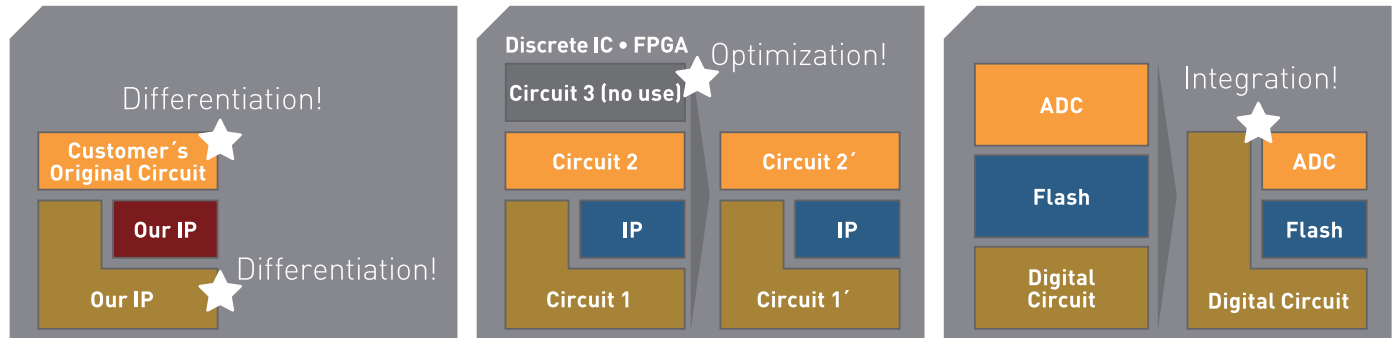
- Use unique IP
- Implement your custom algorithms
- Differentiate your product from your competitor's

Optimization

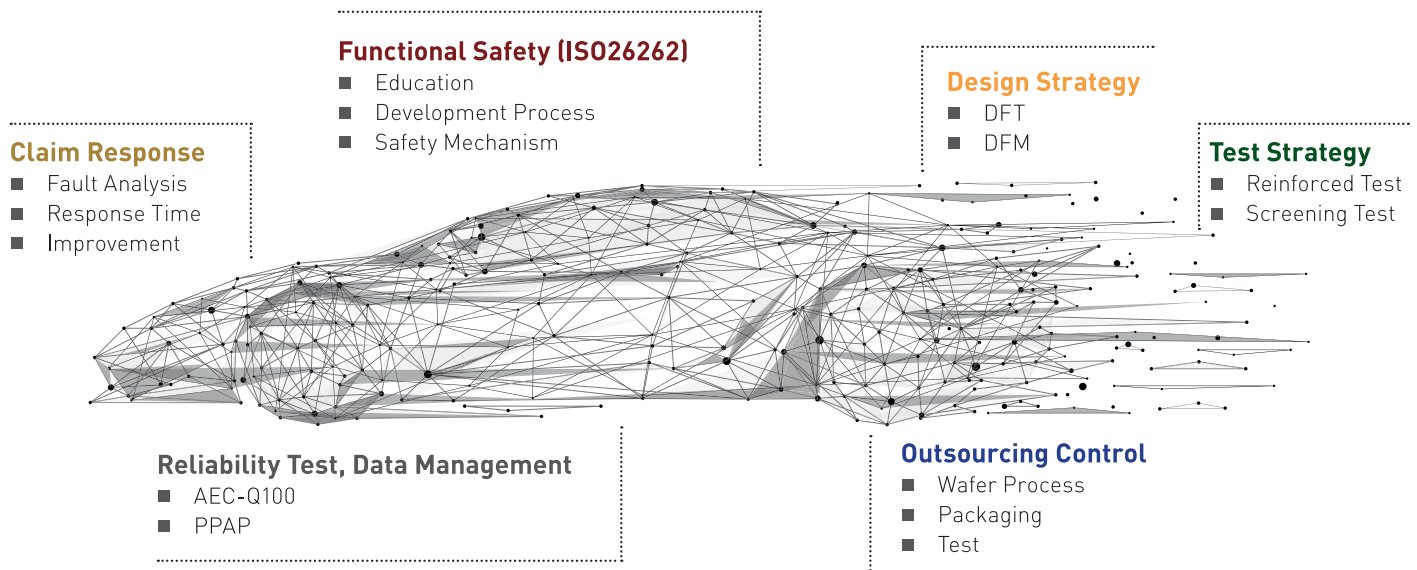
- Optimize performance
- Optimize size
- Optimize power
- "No dead silicon"

Integration

- Reduce your BOM
- Integrate digital, analog and RF
- Integrate Flash or SRAM memory



Automotive Support for your ASICs



Socionext works with industry-leading partners to provide best-in-class Automotive Custom SoC solutions to our customers:

arm

cadence®

synopsys®

DTS INSIGHT

SGS

Japan Automotive Research Institute

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February 2020
Edited: Automotive & Industrial Business Promotion Dept., Business Development Div.

Socionext Europe GmbH

Pittlerstrasse 47
63225 Langen, Germany
Tel: +49-6103-3745-0
info@eu.socionext.com
<https://eu.socionext.com>