

Infineon

Safety Seminar - May 18, 2015

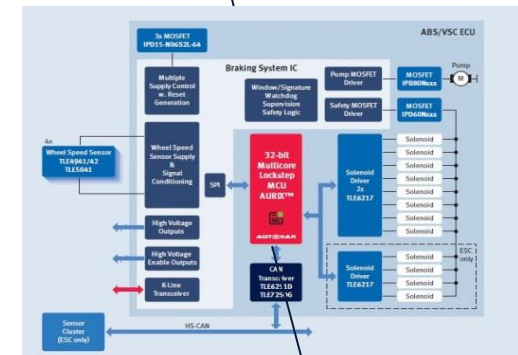
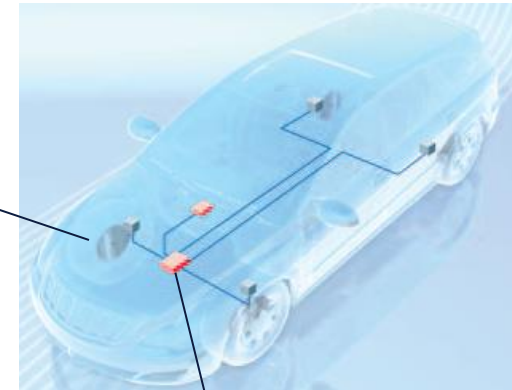
How New Safety Requirements Impact the Automotive μ C Design Flow

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Never stop thinking

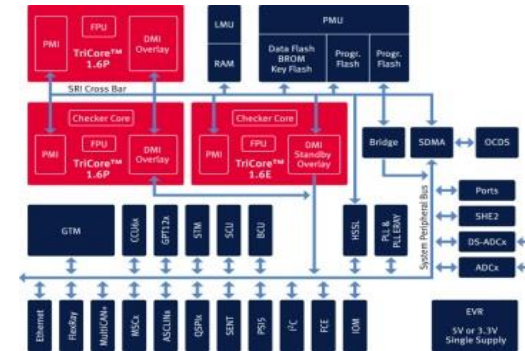
- Braking Applications
 - Braking ECU System
 - Electric Parking Brake
 - ABS/VSC
- ADAS
 - Multi-Purpose Camera Configuration
 - Short/Mid/Long Range Radar 24/77GHz
- Restraint Applications
 - Airbag Systems
 - Reversible Seatbelt Pretensioner
- Steering Applications
- Suspension Control
- Chassis Domain Controller
- Tire Pressure Monitoring System



AURIX tricore architecture

➤ Many more in future ...

- ISO 26262 :
product design + development flow
- HW and SW safety measures added for meeting safety requirements
 - Redundancy, error detection/ correction, alarm systems
- ASIL classification:
 - Safety-critical IP, CPUs, memories, registers, ...
- Safety verification needed on top of functional verification
- Evidence of ISO compliance (state-of-the-art) for all design phases
 - e.g. diagnostic coverage, requirement traceability
- Higher product complexity, area and power consumption, development and production costs



Dilemma: Market rejects μ C products ...

- ❖ ... not ISO 26262 certified!
- ❖ ... too expensive!

➤ **Smart tools and methodologies needed!**