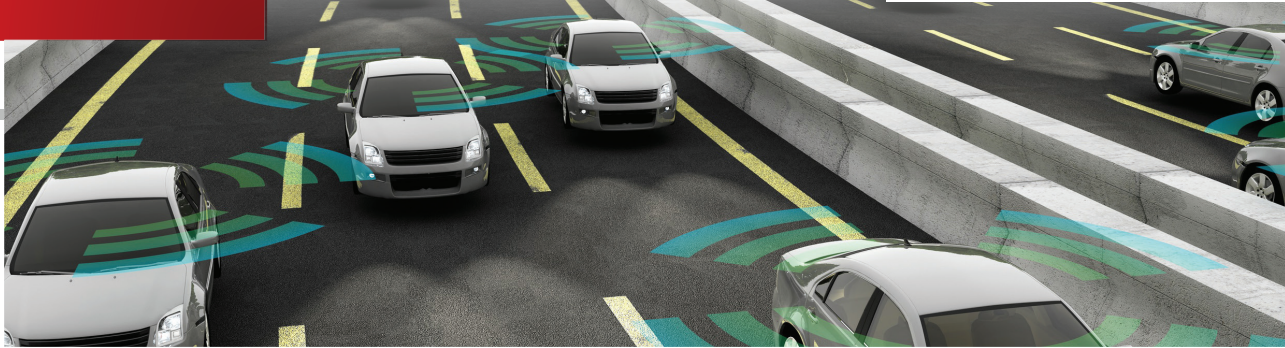


**leti**  
cea tech

**infineon**



# SigmaFusion™ based on AURIX™

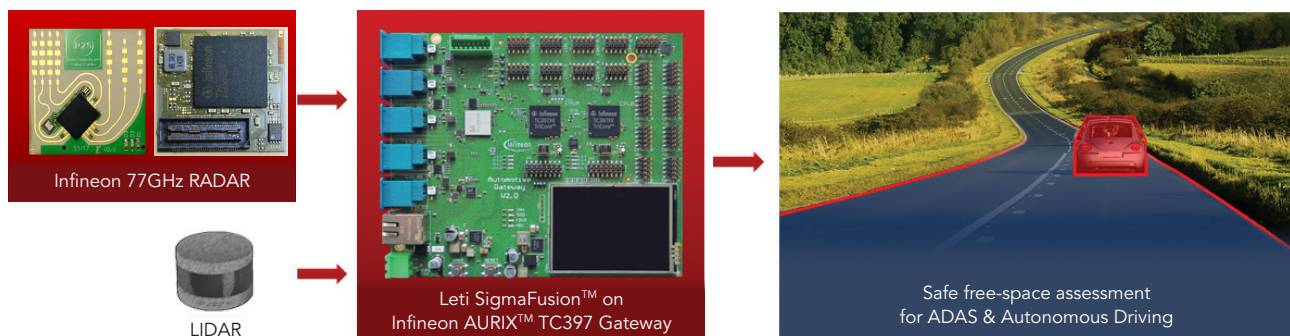
**SAFE PERCEPTION WITH LOW POWER SENSOR FUSION**  
based on INFINEON AURIX™ 2<sup>ND</sup> GENERATION AND 77GHZ RADAR

## Safely powered by AURIX™

SigmaFusion™ is a free-space assessment solution based on multi-sensors fusion. The powerful combination of Leti SigmaFusion™, running with Infineon AURIX™, Radar and safety supply ensures a safe low-power automotive-grade solution.

SigmaFusion™ based on AURIX™ provides

- Safety co-pilot for up to Level 5 autonomous driving system
- ADAS functions with fail-operational perception of the vehicle environment



## + LETI SIGMAFUSION™ ENABLES:

- Free-space assessment to increase safety of Artificial Intelligence driving algorithms
- Automotive-grade multi-sensor fusion for performance and power aware ADAS
- Accurate, safe and predictable sensor fusion implementation
- Compatibility with any kind of range sensor
- Under the 3-watt barrier implementation

## + FEATURED INFINEON PRODUCTS:

### 77GHz Radar RXS8160

- 3 transmit – 4 receive 77GHz transceiver with integrated, configurable baseband
- Powerful programmable waveform generator w/ fast chirp modulation
- Low-Power 130nm BiCMOS technology in eWLB package

### Safety Microcontroller AURIX™ TC397X

- Six TriCore™ with up to 300 MHz (4x Lockstep plus 2 non-Lockstep Cores),
- TriCore™ DSP functionality, supporting floating point and fix point with all cores
- Ethernet 1Gbit, FlexRay, CAN-FD, LIN, SPI
- 16 MByte embedded Flash memory with latest SOTA requirements

### Radar Microcontroller AURIX™ TC397XA

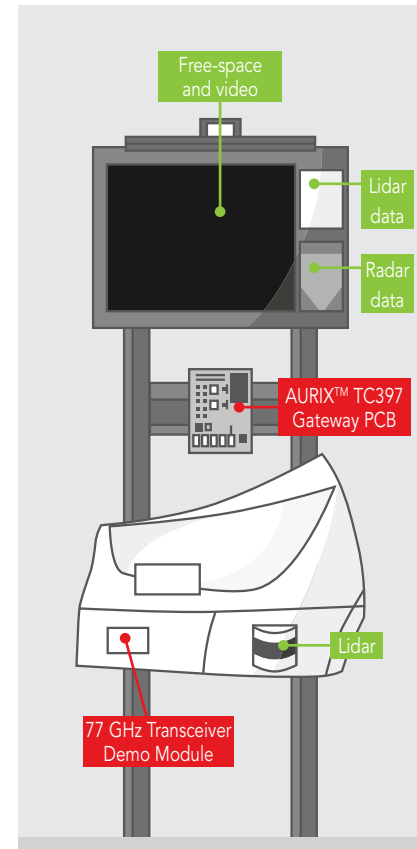
- 2x radar signal processing unit (SPU) running at 300 MHz each
- Highspeed LVDS sensor interface up to 3.2Gbps (RIF)
- 4 MB of internal radar SRAM
- ISO26262 ASIL-D capable radar processor

### OPTIREG™ PMIC TLF30682

- Integrated monitoring and supervision
- Reduced number of external components for minimized PCB-area

### CAN-FD TLE9251V

- Includes robust Wake-up pattern detection (WUP) fulfilling worldwide wake-up filter timing
- Is approved without external ESD protection at NAFTA OEMs



## INTERESTED IN THIS TECHNOLOGY?

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