

## Customer Success Story

# Enabling Safety-Critical Automotive Design Verification

## The Customer Challenge

CEVA needed to develop a robust functional safety verification methodology for their advanced DSP and AI IP cores used in automotive and mission-critical applications. The primary challenge was ensuring proper operation of safety mechanisms while meeting stringent ISO 26262 requirements. This demanded innovative approaches to verify multiple scenarios across complex sensor hub DSP architectures processing data from various sources including camera, Radar, LiDAR, Time-of-Flight, microphones, and inertial measurement units.

## The Veriest Solution

**Veriest Solutions provided comprehensive verification services to ensure automotive-grade reliability:**

- Developed innovative functional safety verification methodology combining black-box and white-box approaches
- Implemented error generation capabilities within UVM environment
- Created formalized procedures meeting ISO 26262 requirements
- Extended classical verification methodologies with stricter safety-focused rigor
- Maintained continuous collaboration with CEVA's technology experts throughout development
- Successfully deployed methodology across multiple DSP and AI IP cores

## Result

**The partnership delivered outstanding outcomes:**

- Successfully developed and implemented novel functional safety verification methodology
- Achieved comprehensive verification of SensPro2™ sensor hub DSP architecture
- Enabled robust safety mechanism validation for automotive applications
- Established foundation for future automotive-grade IP development
- Delivered methodology applicable across multiple mission-critical domains



*"With the increased adoption of our cores in automotive applications, it is fundamental that we thoroughly verify the proper operation of our designs, in multiple scenarios. We have been collaborating with Veriest for many years across different projects, and we're pleased to have jointly achieved this additional milestone."*

**Ran Snir, Vice President of R&D at CEVA**