PREMIUM RADAR SDK

Advanced radar processing algorithms for radar performance enhancement

The Premium Radar SDK is an advanced radar software development toolkit incorporating advanced radar processing algorithms, which are optimally implemented to run efficiently on NXP's S32R4x radar processors. It provides state-of-the-art solutions to address complex and challenging radar processing tasks, such as interference mitigation, MIMO waveform design and artifacts mitigation and angular resolution enhancement.

The Premium Radar SDK is designed to serve the full spectrum of automotive radar applications, from corner radar up, mid- to long-range front radar and up to 4D imaing radar. This powerful toolkit may as well benefit radar sensors for consumer, industrial and agricultural applications.

KEY FEATURES

- Mitigation of multiple interference sources with different natures - uncorrelated, semi-correlated and highly-correlated interferences in highly congested enironment

- Innovative MIMO waveforms for constructing large virtual arrays, including advanced solutions for mitigating the associated virtual array construction artifacts

- Computational angular resolution enhancement for both uniform and sparse antenna arrays beyond physical aperture limit

- Highly scalable for a wide range of radar use cases

- Optimally implemented for NXP S32R4x radar processor family with exceptional processing efficiency

- Ease-of-use for software development through target hardware specific libraries

- User customizable via supplied source code

- Functional safety: ISO26262 ASIL-B/D compliant for core libraries

- Automotive quality: IATF 16949:2016 & ASPICE Level 3 compliant for core libraries
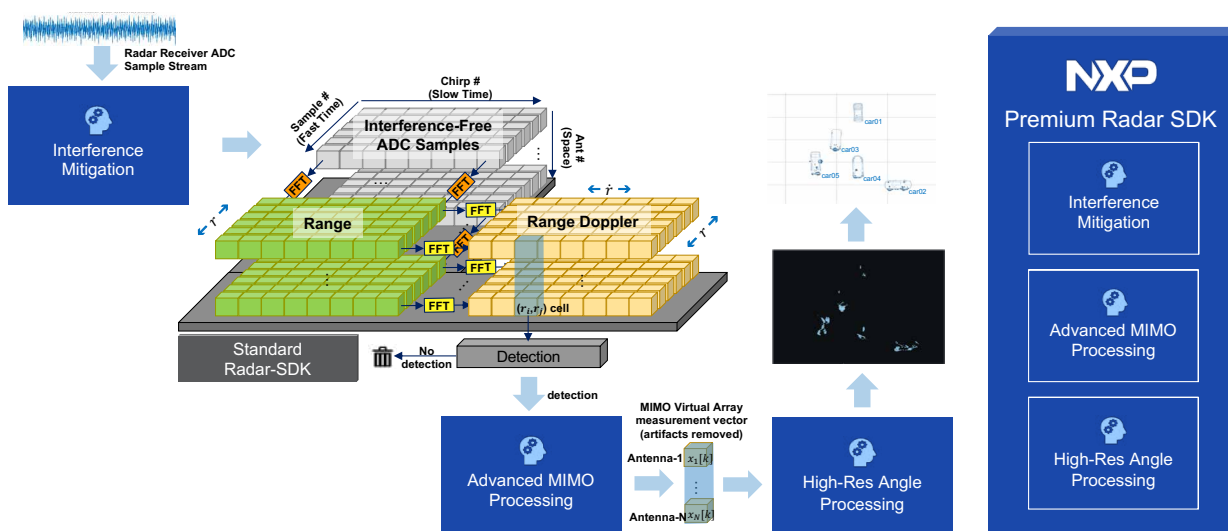
TARGET APPLICATIONS

- Automotive
- Consumer
- Industrial
- Agricultural

SOFTWARE & TOOLS LIST

- Evaluation package
  - Matlab implementation including testbench
  - Binary implementation including matlab scripts
- Development package
  - Algorithm source code
  - Core libraries binary code

LIST OF BENEFITS

- Maximize radar processing capability for superior performance enhancement
- Access to state-of-the-art innovation with little upfront investment required
- Product differentiation with accelerated time-to-market

PREMIUM RADAR SDK COMPLEMENTS CUSTOMER RADAR SIGNAL PROCESSING CHAIN