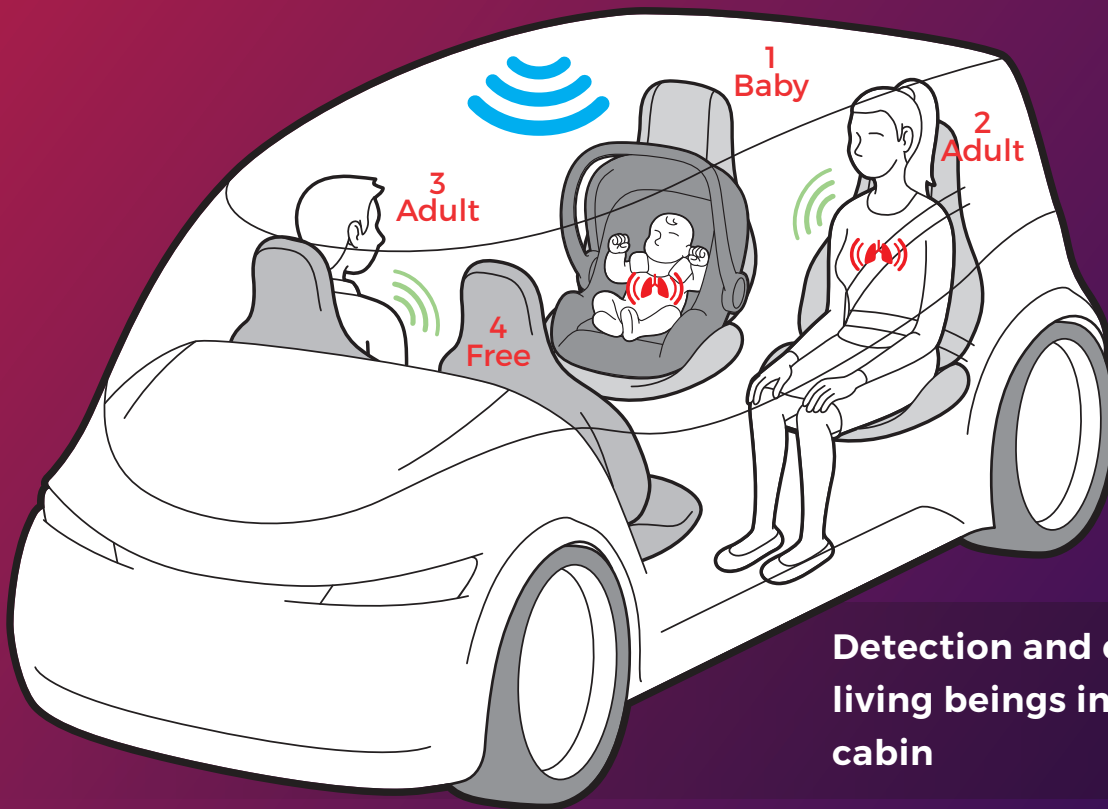


RADAR SYSTEM FOR 100% RELIABLE IN-CABIN MONITORING

COVERING EURO NCAP FEATURES AND MUCH MORE



Detection and classification of living beings in an automotive cabin



Child Presence Detection



Seat Occupancy Detection



Occupant Classification



Intrusion Alert

KEY SYSTEM FEATURES

- Full cabin coverage for all vehicle types
- A modular set of use cases -> OEM's choice
- Various mounting positions are possible
- Processing is possible on a radar module or the vehicle computing unit
- Minimal memory consumption per use case
- Optimized duty cycling for low-power modes

SENSOR PLATFORM PARAMETERS

Technology:	60-GHz FMCW
Interface:	CAN-FD for embedded processing Ethernet for vehicle computing unit processing
Power consumption:	Child and Occupant Detection: <1 W Intrusion: <100 mW
Operating temperature:	Automotive Grade

ADVANTAGES OF mm-WAVE RADAR SENSORS

SENSITIVITY

mmWave radar sensor can monitor the slightest micro-vibrations of a person anywhere in a cabin and distinguish humans from objects on seats.

SEAMLESS INTEGRATION

Small size combined with the capability to easily integrate the sensor behind headliner, close to interior lighting on the roof or B-pillar.

RELIABILITY & PERFORMANCE

Detects life even in the footwell zone - a wide field of view ensures full interior coverage.

FULLY-CUSTOMIZABLE MOUNTING

mmWave radar sensors can be customized to fit specific vehicle position demands and accommodate specific contactless gesture control commands.

ROBUSTNESS

Radar sensors operate reliably in all lighting conditions. Negligible impact of thick clothes/blankets on the detection of human life.

PROTECTS PRIVACY

Continuous monitoring of the vehicle's interior without breaching privacy.

Comparison of different in-cabin sensor technologies

	60 GHz FMCW Radar	UWB Radar	Camera	Ultrasonic
Spatial resolution with a single sensor	✓	✗	✗	✗
Privacy protection	✓	✓	✗	✓
Non-line-of-sight sensing	✓	✓	✗	✗
Robustness (lighting, vibrations)	✓	✓	✗	✗
Micro - motion resolution to detect vital signs, gestures and life being's behavior	✓	✓	✗	✗