

Ultrasonic Product Portfolio



IC SOLUTIONS FOR ASSISTED AND AUTONOMOUS DRIVING

- Worldwide No 1 Ultrasonic IC supplier
- Over 1.4 billion Ultrasonic ICs delivered
- More than 25 years of experience in innovative sensor solutions
- Broad ASSP product portfolio
- Supporting customer applications from low cost ECU less systems up to high end ADAS integration
- Enabling object localization
- Ultrasonic master IC supports future system architectures
- Functional Safety ISO 26262 ASIL-B compliant

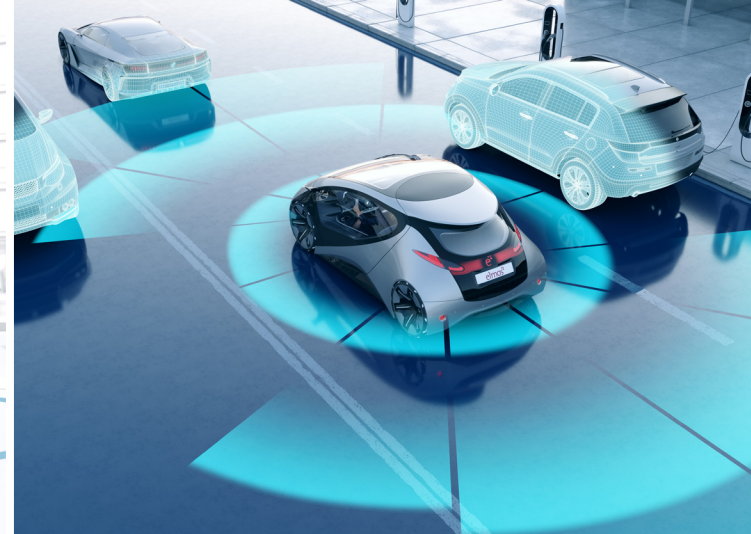
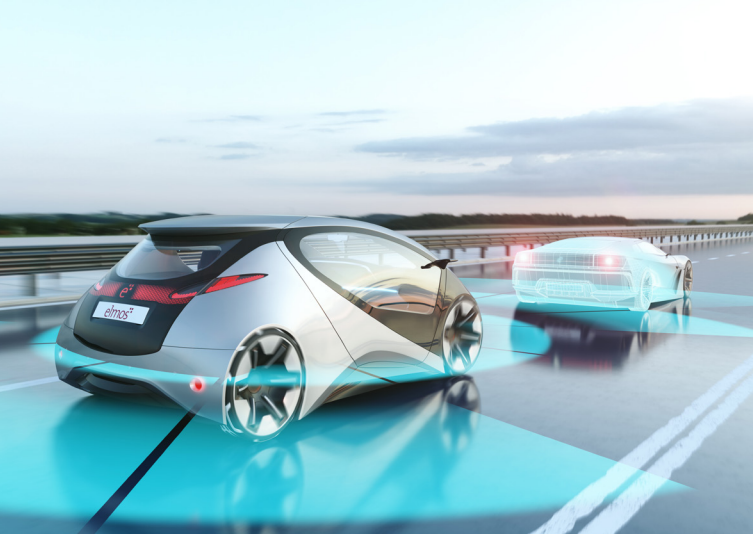
	IO pt-to-pt Interface	LIN BUS (or pt-to-pt) Interface	DSI3 BUS (or pt-to-pt) Interface
Sensor-IC Transformer Driven	E524.08/09 Transformer Drive with advanced IO Interface	E524.24 Smart Transformer Drive with LIN Interface	E524.17 Smart Transformer Drive with DSI3 Interface
		E524.37 Smart Transformer Drive with LIN Interface	
Sensor-IC Direct Driven	E524.32/33 E524.34/35 Direct Drive with advanced IO Interface	E524.36 Smart Direct Drive with LIN Interface	
Master-IC			E521.42 Master IC 2 channel DSI3 Transceiver for Bus Systems



Ultrasonic sensor ICs for
Near Field Surveillance



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Options

Different Architectures

Depending on your existing architecture or future plans, Elmos offers a variety of products supporting different interfaces like LIN or DS13 as well as various architectures like daisy chain bus or point-to-point.

Direct Drive

No external transformer required and now with significantly improved short range performance meaning less costs per sensor and system.

ECU Less

Create a cost effective parking system without an external ECU by simply using one sensor IC as a master. Moreover, the last sensor in the chain can drive a speaker and/or display for acoustical and visual feedback.

Auto Addressing

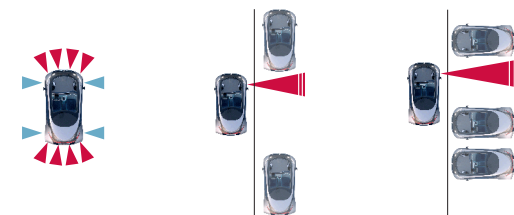
In Bus architectures the sensors can automatically find their position in the chain, no need for external circuits to implement an addressing algorithm.

Advantages

- **Best ultrasonic measurement performance**
Ultra short range and long distances from 10cm to 6m
- **Variety of integrated diagnosis functions**
for IC, external components, transducer and communication
- **Standardized fast communication interface**
Flexible high speed DS13
- **Maximum flexibility and efficiency**
Shorter development times and easy software adaptations „as well as “off the shelf” solutions” due to embedded microcontroller
- **Product options for cost reduction**
 - Direct Drive
 - ECU-less
 - Auto Addressing

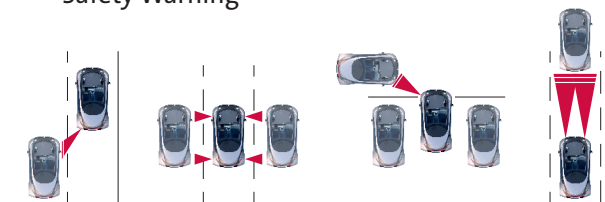
Applications

Park Assist



- Standard Parking with acoustic signal for front and rear
- Automatic Parking incl. detection of available side and parallel parking slots while driving

Safety Warning



- Blind Spot Detection for close range
- Side Distance Warning
- Cross Traffic Emergency Brake when backing out
- Pre-Crash Warning / Low Speed Emergency Braking