

Safe and Dynamic Driving towards Vision Zero

SensePlanAct

Chassis & Safety

Continental 



Senses for Safety.

Driver assistance systems help save lives.

Advanced Driver Assistance Systems

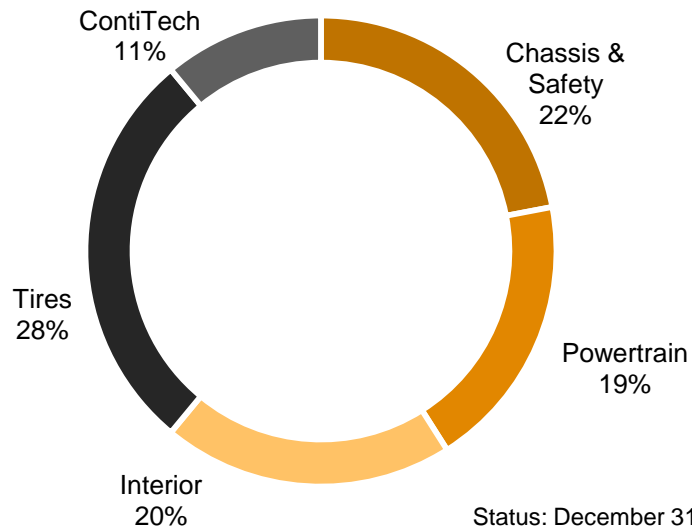


Continental Corporation

Overview 2014

-
- › Since 1871 with headquarters in Hanover, Germany
-
- › Sales of €34.5 billion
-
- › 189,168 employees worldwide
-
- › 317 locations in 50 countries
-

Sales by division in %



Continental Corporation

Five Strong Divisions

Chassis & Safety

Vehicle Dynamics

Hydraulic
Brake Systems

Passive Safety &
Sensorics

Advanced Driver Assistance
Systems (ADAS)

Powertrain

Engine Systems

Transmission

Hybrid Electric
Vehicle

Sensors &
Actuators

Fuel &
Exhaust Management

Interior

Instrumentation &
Driver HMI

Infotainment &
Connectivity

Intelligent Transportation
Systems

Body & Security

Commercial Vehicles &
Aftermarket

Tires

PLT,
Original Equipment

PLT, Repl. Business,
EMEA

PLT, Repl. Business,
The Americas

PLT, Repl. Business,
APAC

Commercial
Vehicle Tires

Two Wheel Tires

ContiTech

Air Spring Systems

Benecke-Kaliko
Group

Compounding
Technology

Conveyor Belt
Group

Elastomer Coatings

Fluid Technology

Power Transmission
Group

Vibration Control

PLT – Passenger and Light Truck Tires



Continental Engineering Services Business Model



**Continental
Business Unit**

Continental products for volume production



**Continental
Engineering Services**

Engineering Services

Prototypes / Small Series Products



Customer

Continental Engineering Services

Continental Divisions and Positioning of CES

Automotive Group



**Chassis &
Safety**



Interior

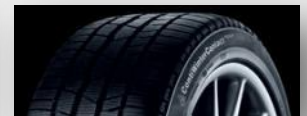


Powertrain

Rubber Group



Conti Tech

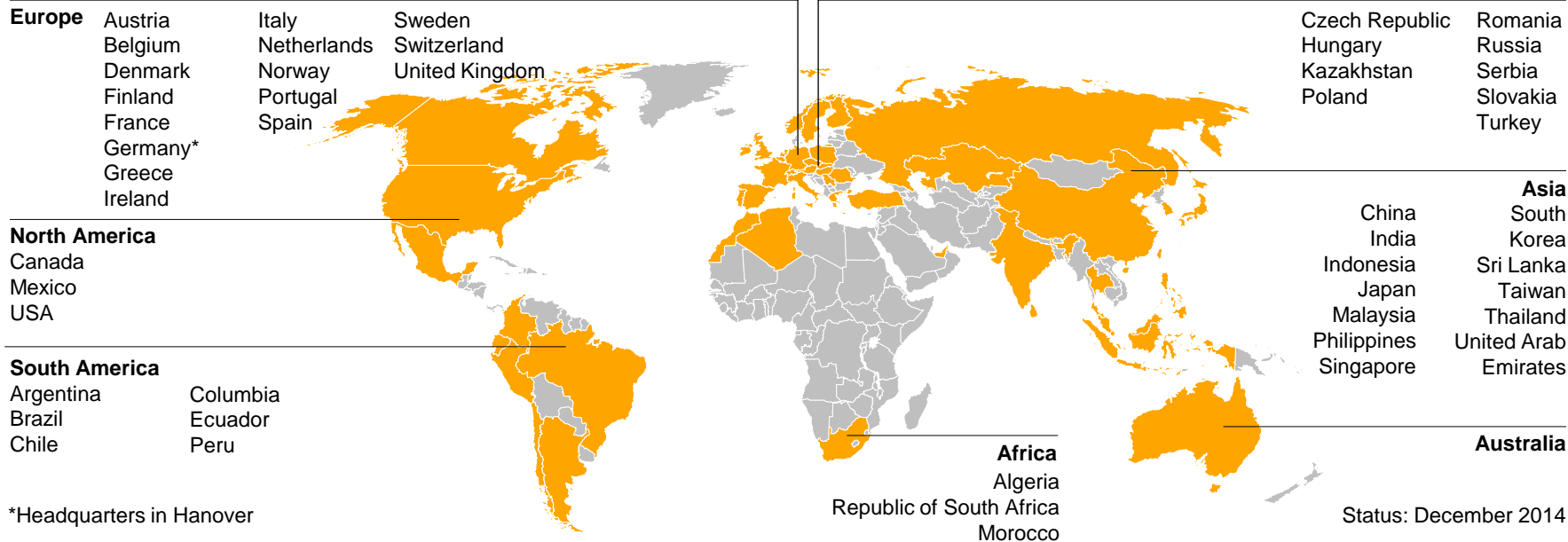


Tires

Portfolio of Continental Engineering Services

Continental Corporation

317 Locations in 50 Countries



ADAS

Product Portfolio

Stereo Camera



Mono Camera



Multi Function Mono Camera with Lidar



Short Range Lidar



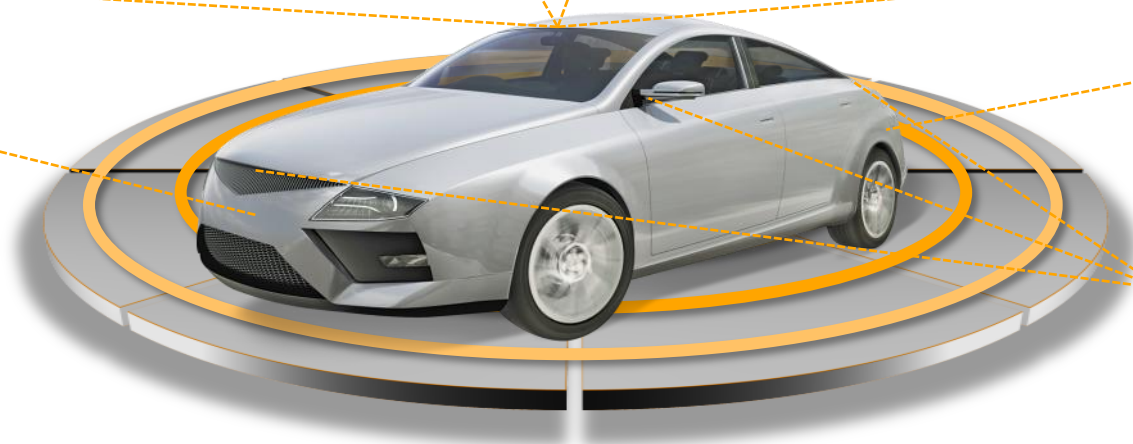
Short Range Radar



Long Range Radar



Surround View



Multi Function Mono Camera - MFC4x0

Features:

- › Compact One Box Design
- › Scalable → from single to multiple functions on different hardware setups
- › Extended computing power to enhance performance

Functions:

- › Lane Departure Warning (LDW)
- › Traffic Sign Assist (TSA)
- › Intelligent Headlamp Control (IHC)
- › Forward Collision Warning (FCW)



Multi Function Stereo Camera - MFS430

Features:

- › 6D-Object detection – 3D spatial + 3D flow
- › Generic object detection – from road boundaries to pedestrians
- › Redundant object detection – improved functional safety

Functions:

- › Forward Collision Warning (FCW)
- › Lane Departure Warning (LDW)
- › Intelligent Headlamp Control (IHC)
- › Traffic Sign Assist (TSA)
- › Adaptive Cruise Control (ACC) + Stop&Go (speed limited)
- › Emergency Brake Assist (EBA) incl. pedestrian
- › Road Profile Detection (RPD)



Multi Function Camera with Lidar – MFL4x0

Features:

- › Compact One Box Design with a fusion of the camera and laser sensor technology
- › Color CMOS imager, 1024x605 pixels and 905nm Lidar

Functions:

- › EBA up to 80kph (Fusion of Camera & Lidar)
- › Object recognition, e.g. for the Forward Collision Warning (FCW)
- › Lane Departure Warning (LDW)
- › Intelligent Headlamp Control (IHC)
- › Traffic Sign Assist (TSA)
- › Pedestrian Detection (classification)



Short Range Infrared - LIDAR Sensor - SRL111

Features:

- › Crash type classification is provided
- › Enhance supplemental restraint systems
- › Autonomous braking, pre charge or advanced brake assist are supported for low speed
- › Brake intervention requests is provided
- › Robust design
- › High reliability
- › Low cost

Functions:

- › Emergency Brake Assist (EBA)



Short Range 24Ghz - RADAR Sensor - SRR320

Features:

- › Alert of driver to the presence of relevant objects within the detection zone
- › 24 GHz ISM technology allows for worldwide usage
- › Easy to integrate behind standard bumper
- › Pulse-compression radar technique separates objects in space, speed and angle already in the raw data measurements
- › Realize high spatial resolution in a narrow bandwidth
- › Distinguishes easily between static and moving objects

Functions:

- › Blind Spot Detection (BSD)
- › Rear Cross Traffic Alert (RCTA)
- › Lane Change Assist (LCA)



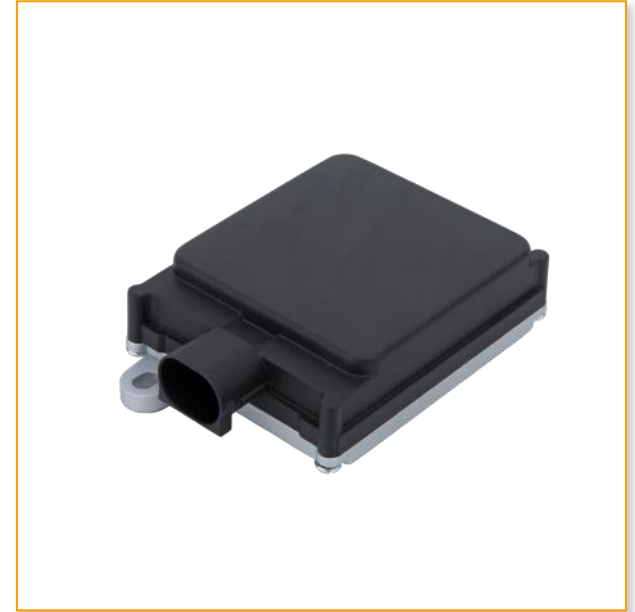
Long Range 77GHz - RADAR Sensor - ARS4x0

Features:

- › Broad field of view realized by two independent scans
- › Supports ACC + Stop & Go with one single sensor
- › Up to 250m range
- › Better than 3° target separation and 0.1° accuracy
- › Distinguishes easily between static and moving objects
- › Auto alignment in both directions (horizontal + vertical)

Functions:

- › Adaptive Cruise Control (ACC) + Stop&Go
- › Emergency Brake Assist (EBA)



ADAS Product Segments

Radar



Functions:

- › Adaptive Cruise Control
- › Emergency Brake Assist
- › Forward Collision Warning
- › Blind Spot Detection
- › Lane Change Assist
- › Rear Cross Traffic Alert



LRR

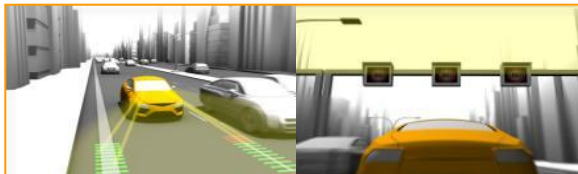


SRR

Products:

- › Long Range Radar (77GHz)
- › Short Range Radar (24GHz)

Camera



Functions:

- › Intelligent Headlamp Control
- › Lane Departure Warning
- › Lane Keeping Support
- › Traffic Sign Assist
- › Forward Collision Warning
- › Emergency Brake Assist
- › Road Profile Estimation



Products:

- › Mono Camera
- › Stereo Camera

Lidar



Functions:

- › Emergency Brake Assist - City
- › Emergency Brake Assist - Urban
- › Emergency Brake Assist - Pedestrian
- › Crash Imminent Braking



Products:

- › Short Range Lidar Sensor
- › Multi Function Camera with Lidar

ADAS Product Segments

Surround View



Functions:

- › 2D Surround View
- › 3D Bowl Surround View
- › Automated Parking
- › Trailer Reversing
- › Auto Trailer Hitching
- › Object/Pedestrian Detection with Warning
- › Blind Spot Warning
- › Lane Departure Warning



Products:

- › Surround View Camera
- › Surround View ECU

Rear View



Functions:

- › Parking Support (Warning)
- › Trailer Reversing
- › Auto Trailer Hitching
- › Object/Pedestrian Detection with Warning/Braking
- › Blind Spot Warning



Products:

- › Intelligent Rear View Camera

Mirror Replacement



Functions:

- › Object Detection with Warning
- › Blind Spot Warning
- › Lane Detection

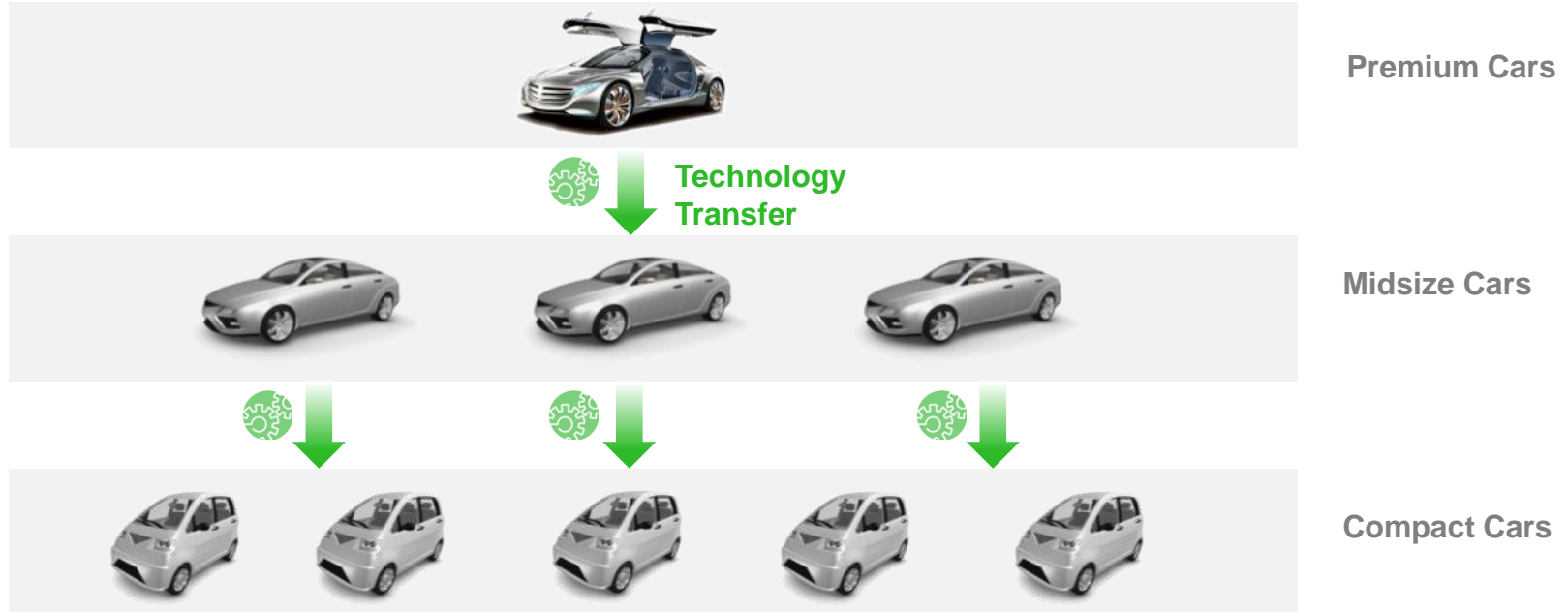


Products:

- › Mirror Camera
- › Mirror Camera - Truck

Business Trend 1

Increasing Vehicle Penetration



Safe and Dynamic Driving towards Vision Zero

SensePlanAct

Chassis & Safety

Continental 

