# PARTS

## Production-Ready Automotive Radar Test System

High-resolution testing and validation solution for automotive radars

OTA (Over-the-Air) testing performed on a shielded/anechoic environment

Multiple target simulation with control of specific parameters (RCS, distance, velocity, etc.)

Simultaneous characterization of the radar antenna's radiation diagram

Robust connectors and modular fixturing for dozens of thousands of mating cycles




## PRODUCT DESCRIPTION

PARTS is a high-resolution test solution developed by CONTROLAR for testing automotive radars in the production line (EoL). It ensures automated pass/fail automotive radar validation for quality control and safety compliance.
Based on a semi-automatic process for easy operation and product maneuvering by the user, PARTS can be integrated into automated factory production lines.

## KEY FEATURES

- CE marked
- Suitable for multimode radars (LRR, MRR, SRR)
- Coverage of multiple frequency bands (24; 76-77; 77-81 GHz)
- 3D pan-tilt system for radar antenna's radiation diagram
- High-quality fixturing for quick change over
- OTA (Over-the-Air) testing performed on a shielded/anechoic environment
- Multiple target simulation with control of specific parameters (RCS, distance, velocity, etc.)

## PRODUCT CONFIGURATION

PARTS is an all-in-one solution composed of various blocks:

1 / Radar Target Generator *
2 / Semi-automatic load/unload of radar Unit Under Test (UUT)
3 / Anechoic and shielded chamber for testing and validation of radar UUTs
4 / Baseline machine – main computer, HMI, PLCs for automation and motors control, electrical board, etc.

* Powered by ***R&S® AREG800A*** automotive radar echo generator

## MAIN APPLICATIONS

PARTS is specifically suited for the Automotive industry for functional testing of radar components.

## TECH SPECS

**Dimensions (in mm)**
1030(w) x 1750(l) x 2160(h)

**Target generator specs**

**/ No. of objects:** Up to 4 artificial objects at pre-configured distances (variable distance option is under development)

**/ Range:** 4 m – 300 m (minimum air gap of 0.8 m; extendable up to 1.20 m)

**/ Radial velocity:** ±500 km/h (doppler offsets for all the objects together or for each individual object - under development)

**/ Radar Cross-Section (RCS):** ±40 dBsm configurable per individual object (e.g. metal can, human, car, truck, etc.)

**/ Antenna:** Monostatic (e.g. MIMO Radar meas.) and Bistatic (e.g. high isolation) options

**Frequency bands**
24.05-24.25/24.5 GHz; 76-77 GHz; 77-81 GHz
ETSI EN 301 091-1; ETSI EN 302 264; ETSI EN 301 489-51; ETSI EN 302 858; ETSI EN 303 396; 2014/53/EU (RED)

**Power supply**

/ 100-230 VAC @ 50/60 Hz

/ Rated current: 16 A (20 A max.)

**Additional I/O**

/ IF input for interference generation

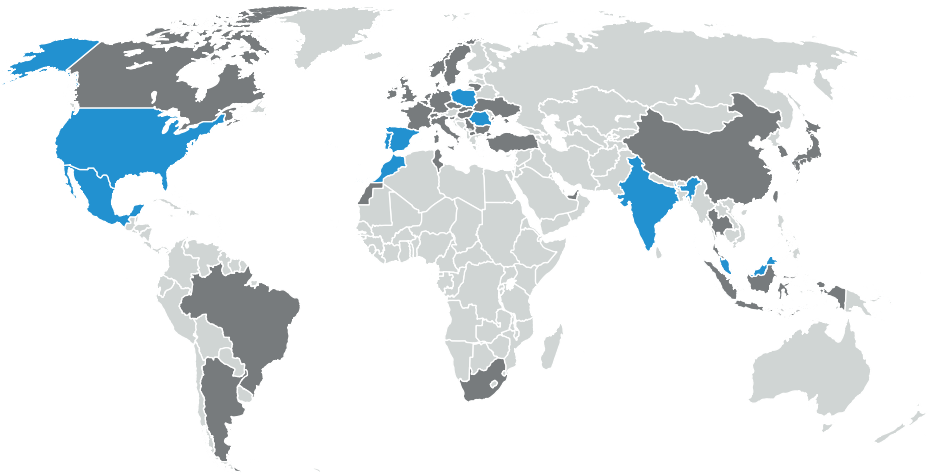
/ IF output for spectrum/power analysis

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