



# ARS548 Long Range RADAR

The ARS548 is our fifth generation 77 GHz, high performance, premium long-range RADAR with digital beam-forming scan antenna, which enables highly autonomous functions both on the road and in the air. The rugged sensor measures independently the distance, relative velocity, azimuth and elevation of multiple objects without a radar reflector within single measurement cycle. The improved range resolution is available in the complete FoV with a real time scanning frequency of 20Hz. Target detections at a range of 300m is achievable (with an extended range mode up to 1500m with limited resolution).

## Technical Information:

- › Distance range 0.2 - 300m (up to 1500m extended range)
- › Distance Resolution 0.22m
- › Distance accuracy  $\pm 0.15$ m
- › FoV in Azimuth  $\pm 60^\circ$
- › FoV in Elevation  $\pm 4^\circ$  at 300m,  $\pm 14^\circ < 100$ m
- › Accuracy Elevation  $\pm 0.1^\circ$
- › Speed range -400 km/h to +200 km/h
- › Speed resolution 0.35 km/h
- › Speed accuracy  $\pm 0.1$  km/h
- › Power consumption 1.5A typical, 3A peak current
- › Operating voltage 8.5V to 17V DC
- › Operating Temperature Range -40 to +85°C
- › Storing temp range -40 to +85°C
- › Outline dimensions 137\*90\*39 mm (without connector)
- › Mass -530g (without connector)
- › Vehicle interface 100Base T1

## Benefits:

- › Robust and Lightweight: ARS548 offer excellent measuring performance in lightweight and compact form factor.
- › Safe & Reliable: ARS548 is safety rated ASIL B for autonomous driving applications and its fail-safe design and onboard diagnostics provide a reliable performance.
- › Auto Alignment: Continuous alignment and misalignment detection capabilities during operation
- › Real elevation measurement: Elevation measurement capabilities proving 3D spatial info on targets.

## Typical Areas of Application

- › Detect & Avoid for RPAS
- › Safe Landing Zone Detection
- › Infrastructure mapping in Agriculture and Construction domains
- › Ground to air object tracking and localisation
- › Free space detection for autonomous ground navigation

