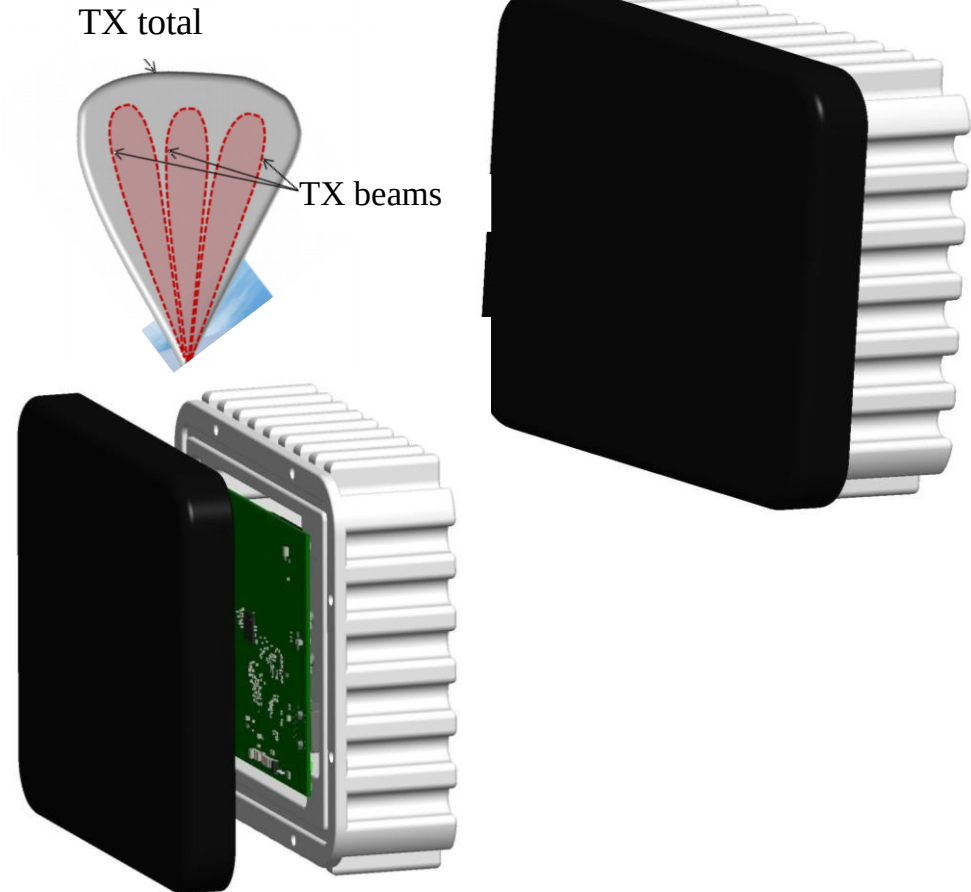
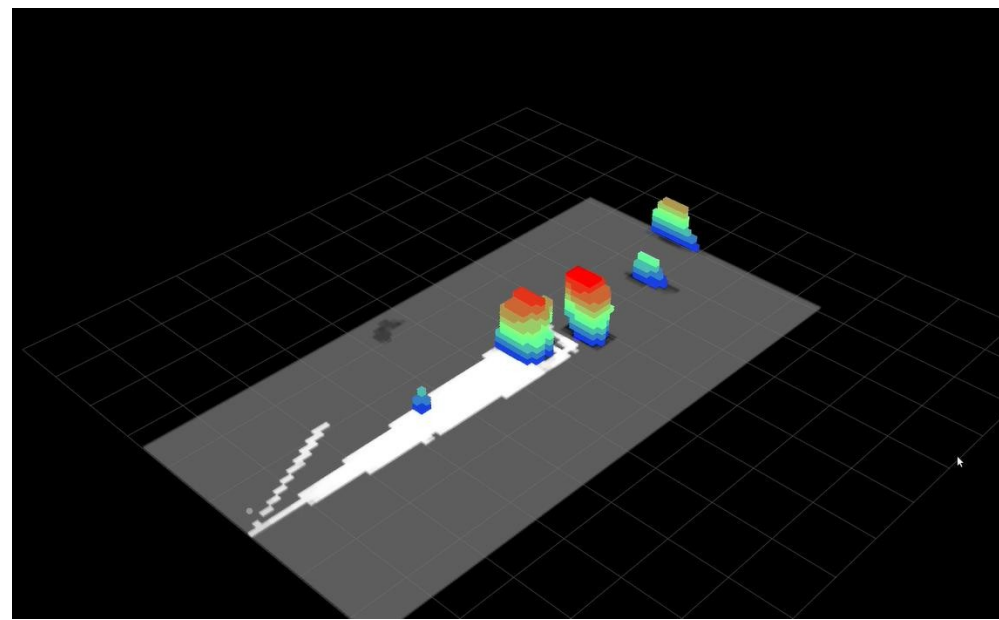


## Features and benefits

- All weather operation
- Detects and tracks static and moving objects in a 3D zone
- High sensitivity due to use of latest chip technology
- **Unique** TX scanning to provide tailored 3D scanning region
- **Unique** RX layout and high coherency to provide **4D** extraction (i.e., instantaneous measurements of target range, Doppler, azimuth and elevation.)
- **Unique** Frequency Switching for improved ROC and classification performance
- UDP interface for radar detection and tracks
- Solid state ( No moving parts)



# Airport Gate Monitoring



Performance	
Operational range	310 m (max)
Range (vehicle~10 dBm <sup>2</sup> )	250 m @±10° relative boresight
Range (human)	60 m
Field of view (horizontal, vertical)	±60° azimuth, ±30° elevation
Range resolution/accuracy	50 cm/5cm
Angle resolution/accuracy (DOA)	0.5° / 0.05° Az; 2° / 0.2° EL@SNR 20 dB
Velocity resolution/accuracy	0.2 m/s and 0.02 m/s
Frequency	76-77 GHz (Optional 77-81 GHz)
Detection	20 Hz
Maximum # Detections	300 detections
Mechanical (housing), Electrical and Environmental Characteristics	
Size	175x119x27 mm
Weight	~1 kg
Operating temperature	-40°C ... +80°C
Ingress protection	IP 65
Impact protection	IK 08
Interface and Target/Object Data	
Data interface	Gigabit Ethernet: M12-Female-Code A
Power interface	24 VDC : STLZ1550/2G-3.81-V
Mounting	4 x M6, Ø 5.08 cm x 90
Detections=>	Ethernet: target/Object 3D position in
Detections after high resolution => Multi-channel point cloud	polar coordinates & Doppler-velocity
Other target paramters	Target SNR, and estimation uncertainties
EMC (FCC, ETSI, Not Yet Japan)	EN 50121-4, EN 301 389-51, EN 301 489-1, EN 55 022, EN 55 024, EN 55 032, EN 61 000-6-1, EN 61 000-6-2, EN 61 000-6-3, EN 301 091-3, EN 303 396
Radio spectrum	EN 301 091-3, EN 303 396
Safety/Health	EN 62 368-1, EN 60 950-22, EN 60 529, EN 62 311
CE	According to RED, RoHS directives and applicable parts of the EMC directive
Model Number	LA_2_REL_2021_1003_D

# AD ~ SLAM

Simultaneous localization and mapping (SLAM) is the problem of constructing or updating a map of an unknown environment while simultaneously keeping track of a vehicle's location within it.

For full AD the road geometry perception is very important, as well as object tracking.

Here is an example of radar mapping in 3D grid maps, using Saferadar HW/SW.

