

# SENSE | PROTECT | SECURE

## HUMAN IN ZONE DETECTION SENSOR

Outstanding detection performance in harsh industrial environments



### THE FIRST CHOICE FOR TOUGH ENVIRONMENTS



HUMIDITY

OIL AND DIRT

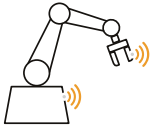
EXTREME  
TEMPERATURES

LIGHT  
INTERFERENCE

FOG AND DUST

## APPLICATIONS

Robotics



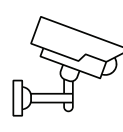
Safety Zones



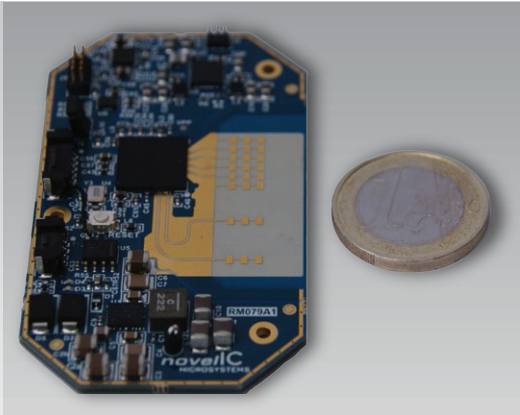
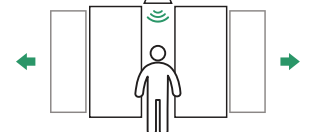
Autonomous Vehicles



Security Systems



Gates, Barriers, Doors



### mmWave Zone Detection Radar

#### KEY FEATURES

- Volumetric detection
- Exact position of people and objects
- Filtering out non-living stationary objects
- Precisely definable area of interest
- Reliable performance in dust, fog & dirt
- Fully temperature independent
- Protecting privacy
- Maintenance free, easy installation

#### DETECTION CAPABILITIES

- Human Presence
- Human Tracking
- Trajectory
- Distance
- Acceleration
- Angle
- Velocity

#### APPLICATION PARAMETERS

	min	typ	max
Field of View		120°	
Detection distance	0.20m		8m
Position accuracy		0.1m	
Detectable object speed	0.01m/s		20m/s
Operating temperature	-40°C		125°C
Supply Voltage		12/48V	

Interfaces: CAN, UART, Bluetooth, WiFi

## Advantages of mmWave Radar Sensors

#### VOLUMETRIC DETECTION

mmWave radar sensors have larger volumetric detection area in comparison to 2D laser sensors

#### FILTERING OUT STATIONARY OBJECTS

Radar sensor can detect humans in zones with a number of objects, even metal ones, such as machines.

#### TEMPERATURE INDEPENDENT

Radar sensor transmits radio waves for the detection of objects. This technology is fully independent of ambient temperatures and object temperatures.

#### SENSITIVITY

mmWave radar sensors are sensitive enough to detect slightest movements of a person, no matter if they are walking, standing still or even sitting in the area of interest.

#### ROBUSTNESS

Radar sensors can operate in harsh industrial environments. Moisture, humidity, dust, fog, dirt, such as oil residue on the sensor do not influence detection performance. In contrast to laser sensors, color absorbing objects can be easily detected. No need to clean lenses.

#### AFFORDABLE

For the similar type of application and with similar performance, mmWave radar sensors should be more price competitive in comparison to other sensor technologies.