

# ASPER™ - RELIABLE SENSOR SOLUTIONS for E-BIKES, MOTORCYCLES, AND 3-WHEELERS

ASPER are mmWave radar sensors built for endurance and safety through next-level perception processing, supporting the aftermarket approach

**Increased Safety | Rear Warning | Optional Blind Spot Monitoring |  
Custom Alerts | Collision Avoidance**



**Rear and side radar  
for transportation vehicles**



**Front/side radars for mining,  
construction, agriculture machines**



**360° collision avoidance and  
navigation for AGVs**



**Rear warning radar for  
2- and 3- wheelers**

**10+ YEARS  
ON THE MARKET**

**300+ SUCCESSFUL  
PROJECTS**

**160+ CUSTOMERS**

**150+ EMPLOYEES**

**10+ SENSING  
PATENTS**

# ADVANCED REAR RADAR MONITORING & OBJECT DETECTION SOLUTIONS FOR E-BIKES, MOTORCYCLES, AND 3-WHEELERS

## Key Features

- Prevents back collision and alerts the rider in rear radar application mode
- Optional blind spot detection
- Easy to install, no maintenance
- Customizable housing and interfaces
- Senses targets in the 0.05-30m range
- Detects moving and stationary objects
- Simultaneously tracks up to 20 targets
- Built-in safety self-diagnostics
- No external data processing required
- Interfaces: custom, RS232, optional wireless
- Analog I/O pins for event triggers
- IP69K rating



## Technical Specifications

- Power supply: 9-33 VDC, reverse polarity and over voltage-protection
- Power consumption/current: 12V, 250mA, ~3W in full duty cycle
- Frequency: 77-81GHz
- Range accuracy: <5cm
- Angle accuracy: <2 deg
- FOV: ~120 deg @+-6dB
- Elevation +-12 deg
- Target detection time of tracker <200ms
- Radar FPS: 80ms
- Operating temperature: -40 to 85°C
- Storage temperature: -55 to 105°C



## WHY NOVELIC SENSOR?

- Increased asset and life protection through powerful mmWave radar sensing
- No cleaning or maintenance required
- Works in all lighting conditions (pitch-dark, glare)
- Customizable obstacle detection range
- Optional wireless communication
- Optional blind spot monitoring and collision avoidance in front operation mode
- Unaffected by dirt, mud, or sand
- Works in all weather conditions (fog, rain, snow)
- Custom ways of alerting the rider
- Easy to install, single-sensor solution