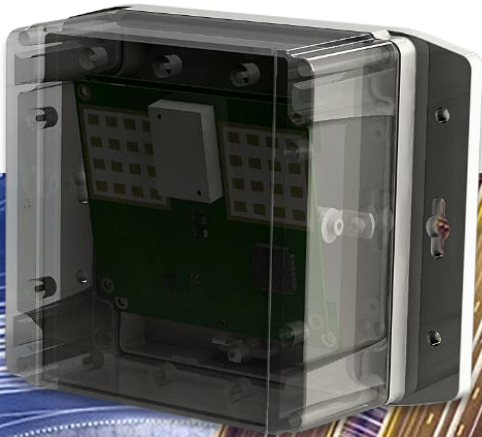


REye-500

24Ghz Traffic Monitoring Radar Sensor



NB-IoT, LTE-M

ADS-300 > SDI-12, RS-485, Analogue, Digital I/O

Introduction

The REye-500 is a traffic monitoring radar sensor using 24GHz millimeter wave technology.

It can be used to monitor traffic in roads and highways. The sensor has a narrow field of view and fast measurement response time.

The sensor incorporates a Doppler radar and an ultra-low power microcontroller for data sampling, subsystem activation and overall system control.

The REye-500 has an I2C interface to connect to ADS-3/4xx devices.

It is a highly accurate traffic measurement sensor supporting multiple detection zones.

The sensor can detect directional traffic (Inbound/Outbound), record date, time, average speed, maximum speed and vehicle size. Vehicle data are classified in five categories (Small, Mid, Full, SUV, Truck).

Data transfer using ADS-3/4xx devices via MQTT.

Applications

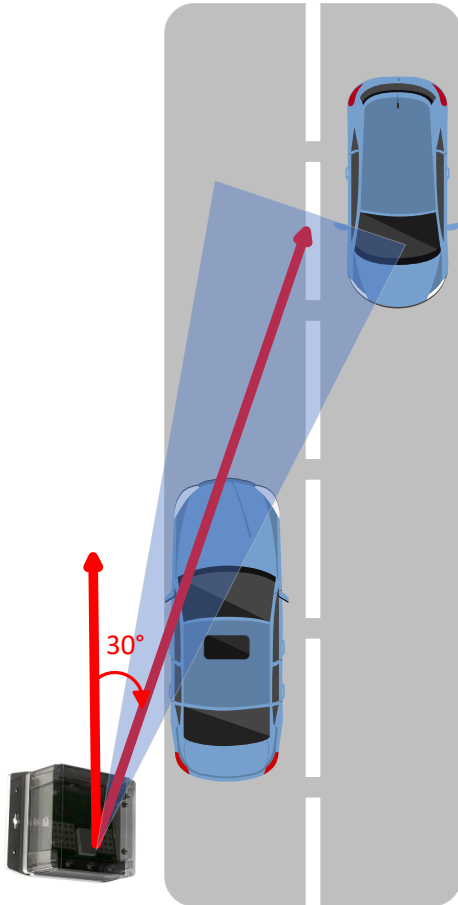
- Road safety & accident prediction
- Traffic Surveys
- Mobility & congestion monitoring
- Transport planning, real time monitoring
- Traffic Police operations support

Features

- 1-100m detection range
- Speed reporting even above 220 Km/h
- Speed accuracy $\pm 0.5\%$
- Narrow 20°H or 24°V beam width (-3 dB)
- Immune to noise (sunlight, dust, rain)
- Quick and easy installation
- Highly accurate traffic measurement
- Supports multiple detection zones
- Directional traffic reporting (Inbound/Outbound)
- Records date, time, average speed, maximum speed, vehicle size and direction
- Vehicle classification in five categories (Small, Mid, Full, SUV, Truck)
- Data transfer using MQTT

Fully integrated with Itron SLV, Cumulocity, Microsoft Azure, Amazon AWS, Losant and any platform via MQTT.

Example installation:
3m height, 10° down angle yields FoV center point 17m away



Setup and programming

The unit is by default configured and there is no need for any user intervention.

Enclosure

Polycarbonate (IP66) for outdoor use.

Technical characteristics

Power supply

External	7-30VDC, IP68 M8, 4pin connector
Consumption	1.8W, 200 mA max
Transmit Freq	24-24.25 Ghz
Connectivity	I2C, IP68 M8 4pin connector
Antenna	Internal
Temperature	-40°C...+85°C operating
Protection	IP66
Dimensions	119 x 119 x 62 mm
Weight	0.3 kg

Ordering Information

Code REye-500

Sample MQTT Payload:

359986127481361

01/05/2024 14:00:00,0,+0000024.5,+000119.9,+90.3,+004.6,03

01/05/2024 14:15:15,0,+0000024.7,+000120.3,+90.3,+004.6,03

```
{\"traffic\":{\"small\":{\"in\":{\"cnt\":4,\"max_speed\":50.22,\"avg_speed\":30.22},\"out\":{\"cnt\":5,\"max_speed\":44.13,\"avg_speed\":35.00}},\"mid\":{\"in\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00},\"out\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00}},\"full\":{\"in\":{\"cnt\":2,\"max_speed\":45.00,\"avg_speed\":34.00},\"out\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00}},\"suv\":{\"in\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00},\"out\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00}},\"truck\":{\"in\":{\"cnt\":1,\"max_speed\":35.00,\"avg_speed\":35.00},\"out\":{\"cnt\":0,\"max_speed\":0.00,\"avg_speed\":0.00}}}}
```

RoHS Compliant
Directive 2002/95/EC



Infinite Informatics, Ltd.

1 Valaoritou St
54626, Thessaloniki, Greece
T: +30-2310-553545
F: +30-2310-552006
E: info@indinf.gr
W: www.infinite.com.gr

Representative - authorized dealer