

REye-100

24Ghz Water Level Radar Sensor



Introduction

The REye-100 is a radar water level sensor using 24GHz millimeter wave technology.

It can be used to monitor the level of sea, lakes, rivers and creeks. The sensor has a narrow field of view and fast measurement response time.

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

The sensor can operate on Lithium Thionyl battery supplying system for up to 10 years.

The REye-100 has an I2C interface to connect to Aerinos devices.

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

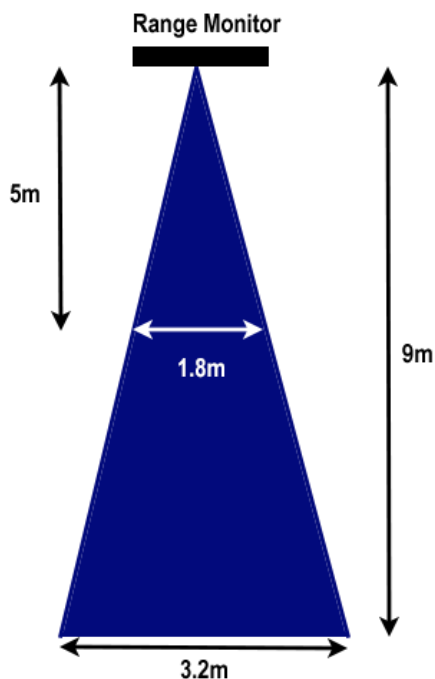
Applications

- Water level at rivers, lakes, sea
- Flood monitoring
- Silo dry level monitoring
- Tank wet level monitoring

Features

- 1-50m detection range
- 4 cm resolution
- Narrow 20° x24° field of view width (-3 dB)
- Immune to noise (sunlight, dust, rain)
- IP66 Enclosure
- ≤2.5W Active power
- Quick and easy installation
- Battery powered operation
- Data transfer using MQTT

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



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

Battery	12VDC
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-100

Sample MQTT Payload:

359986127481361

01/05/2024 14:00:00,0,+0000024.5,+00015230.1,+90.3,+004.6,03

01/05/2024 14:15:15,0,+0000024.7,+00015229.1,+90.3,+004.6,03

RoHS Compliant
Directive 2002/95/EC



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