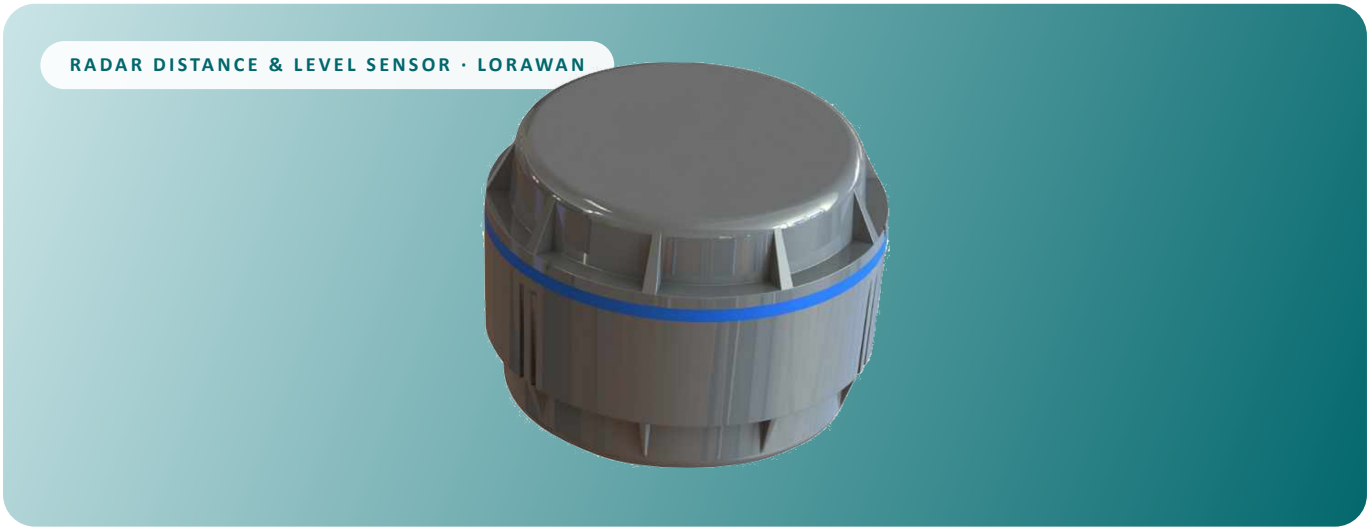


Puck Radar

The versatile radar sensor. It measures distance and level with centimetre accuracy for parking, tanks and silos, waste bins and snow, and runs for ten years on a replaceable battery.

- 60 GHz radar · 0.2–6.8 m · cm accuracy
- Wide ±60° or narrow ±10° lens
- LoRaWAN · NFC
- Replaceable 2,100 mAh · 10 years
- IP67 · –30 to +80 °C

OVERVIEW

Puck Radar uses a 60 GHz pulsed coherent radar to measure the distance to whatever is in front of it, from 0.2 to 6.8 m, with centimetre accuracy, and reports it as a level, a distance or an occupancy state according to the algorithm you choose. It comes with methods for parking bays, waste bins, silo and septic-tank levels, distance metering and snow depth. One method measures two zones at once, for example the fill level of a container and whether its bottom still shows, and up to two exclusion zones mask disturbing echoes from ledges, fittings or walls. In Helsingborg it sits in storm drains, measuring the water level so the city can anticipate flooding and plan maintenance of the stormwater system. A 3D accelerometer reports movement and tilt, so you know if a sensor has been knocked, moved or turned.

Two housings: a standard lens with a ±60° beam for wide coverage, or a narrow lens with a ±10° beam for focused detection at longer range. IP67 with a replaceable 2,100 mAh lithium-thionyl-chloride battery, –30 to +80 °C, NFC configuration from an Android phone, Wi-Fi geopositioning, and a temperature and humidity sensor on board. An adhesive for flat surfaces is included; mounting plates for drilled holes, walls, pipes and wells are available separately.

WHY IT MATTERS

One sensor, many jobs
Parking, waste bins, silo and tank levels, distance metering or snow depth: choose the radar method for the job. One method watches two zones at once, and exclusion zones mask disturbing echoes.

Centimetre accuracy to 6.8 m
Pulsed coherent 60 GHz radar, unaffected by dirt, light or weather.

Outdoors for ten years
IP67, –30 to +80 °C, and a battery you can replace instead of the sensor.

Configure by phone
NFC set-up and firmware upgrades from an Android phone; parameters over the air.

Specifications are subject to change without notice in the interest of continuous product improvement.

Specifications

SENSING

Radar	60 GHz pulsed coherent radar
Range	0.2–6.8 m, centimetre accuracy
Beam	Standard lens ±60° (30 mm high) or narrow lens ±10° (45 mm high)
Radar methods	Well, bin, parking, seating, advanced seating and two-zone distance; two measuring zones and up to two exclusion zones for disturbing echoes
Sensors	Radar, 3D accelerometer (movement and tilt), temperature and humidity, 2.4 GHz Wi-Fi geopositioning

OTHER

Updates	LoRaWAN board: firmware and VSM app with Hugin (NFC), VSM apps also over LoRaWAN. Radar board: firmware only over Bluetooth, with SweIoT Toolbox

CONNECTIVITY

Protocol	LoRaWAN 1.0.4, Class A, OTAA
Frequency	EU868
Configuration	Both boards over LoRaWAN; on site with Android apps, Hugin (NFC) and SweIoT Toolbox (Bluetooth)
Memory	Built-in data memory

POWER AND HOUSING

Battery	Replaceable $LiSOCl_2$, 2,100 mAh, 10 years
IP rating	IP67
Operating temp	–30 to +80 °C
Dimensions	Ø 45 × 30 mm (standard lens) or × 45 mm (narrow lens)
Weight	38 g (standard) · 43 g (narrow)
Mounting	Adhesive, drilled hole, wall, pipe or well (plates sold separately)

TYPICAL USE

One radar, several methods: pick level, distance or occupancy at set-up.

- Parking bay occupancy, indoors and out
- Water level and flood warning in storm drains and wells
- Fill level of septic tanks, silos and containers
- Fill level of waste bins, for collection on demand
- Snow depth and distance metering
- Movement and tilt alarms if the sensor is disturbed

WHAT EVERY SENSOR SHARES

Years on one battery

Ultra-low-power design, and cloud-side processing where it saves energy. Battery life depends on the sensor and how often it reports: well over ten years for most sensors.

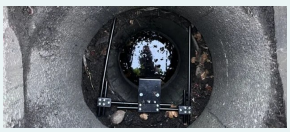
Configured over the air

Every sensor takes its settings over the air, so a change of reporting interval or threshold never means a ladder. Square, Square Xtreme, Puck and Prism can also be set up on site with an Android phone over NFC, and they run downloadable VSM apps: a sensor already on the wall can be given a new task without touching the hardware.

IN THE BOX · MOUNTING



On a concrete column



Street-well bracket with the plate on a cross bar

In the box

Puck Radar, battery and adhesive for flat surfaces.

Mounting

Adhesive, drilled hole, wall, pipe or well (plates sold separately)

MORE INFORMATION

Product page and downloads: sensative.com/sensors/puck-radar
Manuals, payload decoders and integration guides: public.yggio.net/docs
Questions and quotes: sales@sensative.com · Buy: shop.sensative.com or a Sensative reseller

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