







IoT for homes: Z-Wave 800 IoT for cities and buildings: LoRaWAN

Sensative Z-Wave (800-series)

- » Sub-GHz
- » Meshed network up to 800 m range
- » Long Range (LR) range up to 1.5 miles
- » Smart start for easy provisioning
- » OTA firmware upgrades
- » S2 security
- » 10-20 years battery life

Sensative LoRaWAN (SX61/LR1110)

- » Sub-GHz
- » Up to 10 km range @free line of sight
- » Up to 2 km range in cities
- » Up to 500 m & +/- 3 floors in buildings
- » OTAA (Over the Air Activation & Configuration)
- » AES encrypted network & application security
- » Cloud assisted GNSS/Wifi positioning (LR1110)
- » 7-15 years battery life



SENSATIVE SENSOR PORTFOLIO

To monitor and optimize property & city operations



STRIPS

Guard

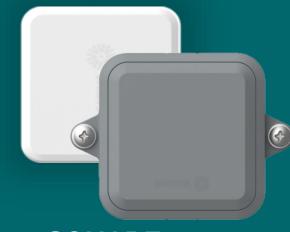
Comfort

Presence

Drip

Oil





SQUARE

Comfort

Sound

Presence

Air

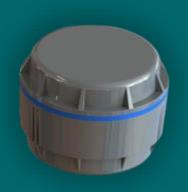
Trackers





DOTS

Tracker From Q1-25 L@RaWAN



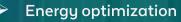
PUCK

Presence

Distance

USE CASES





- **Comfort optimization**
- Climate control
- Space utilization
- **Asset tracking**
- People tracking
- Security
- Blinds management







- Asset tracking
- People tracking
- Parking occupancy
- Level meters
- Public space safety & comfort
- Waste management



- Managed Smart Home/Apartment
- Safety/burglary/theft
- Comfort (Temp, CO2, light, sound etc)
- Mold risk detection
- Fire
- **Asset tracking**
- Septic tank level





- Metering/Behind the meter
- Pro-active maintenance
- **Grid monitoring**
- People safety
- Water/Oil/XX leakage
- Gas leakage
- Level meters
- Security
- Asset tracking
- Level meters
- Parking occupancy
- Seat occupancy



SENSATIVE SENSOR PORTFOLIO

USP: Small form factor, designed for interior environment and long battery lifetime >10 years UNIQUE FEATURES: NFC app as UI, position aware, multi-sensors





IP68

IP68

IP68

STRIPS 196*15*3

GUARD COMFORT **PRESENCE** DRIP OIL

Magnet sensor for doors & windows. Room sensor T/H & ambient light Desk occupancy sensor. Active IR sensor. Water leakage sensor for kitchen, bathroom, industrial etc. Capacitive sensor

Water and oil leakage sensor for industrial, generators etc. Capacitive sensor



SQUARE 58*58*7 58*58*15 67*60*13

TRACKERs COMFORT SOUND **PRESENCE AIR**

Cloud supported 3D motion controlled GNSS/WIFI tracker

Ultra-slim & position aware room sensor with Temp & Humidity sensors Position aware room sensor with T/H, light & sound sensors

Motion and presence IR sensor up to 4 m with T/H/P & ambient light sensors Air quality sensor with Air Q index, CO2e, bVOC, T/H/P and ambient light sensors













DOTS 47*38*11



TRACKER

Tiny asset tracker for keyrings or glued/screwed to assets





PUCK Ø45*30



RADAR

60 GHz radar sensor to use as Parking occupancy or distance meter up to 6.8 m



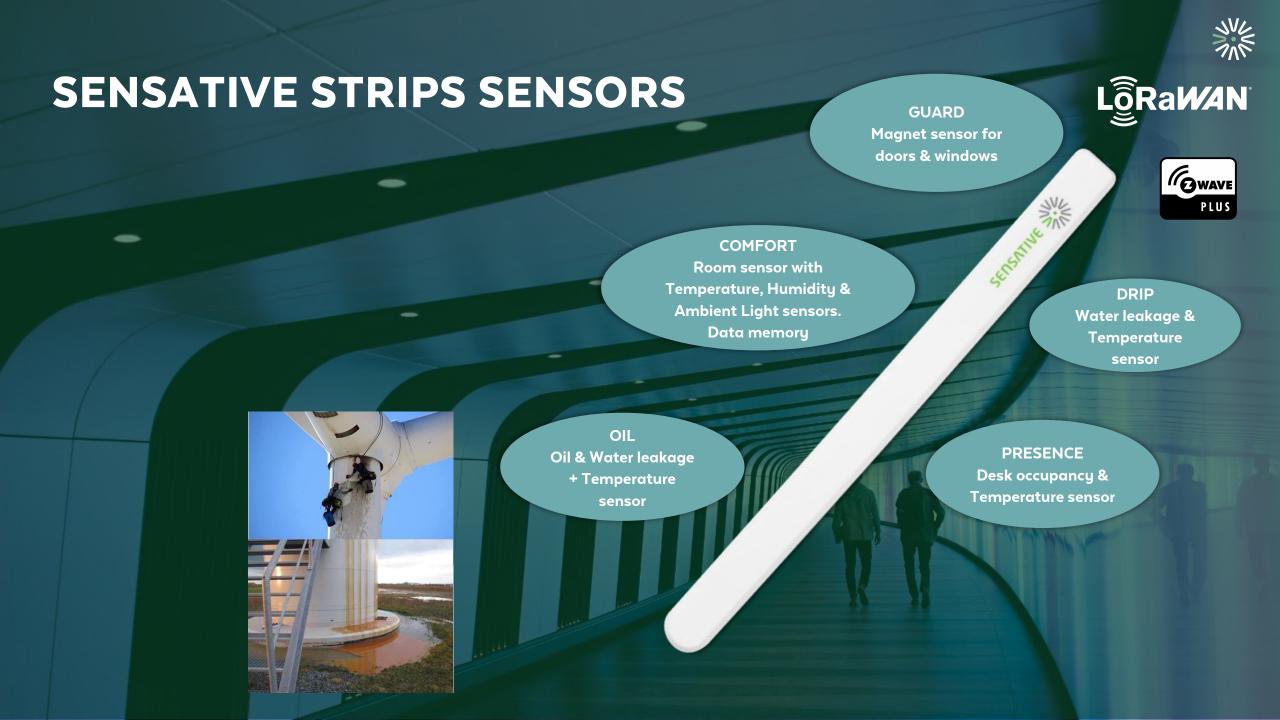
IP67

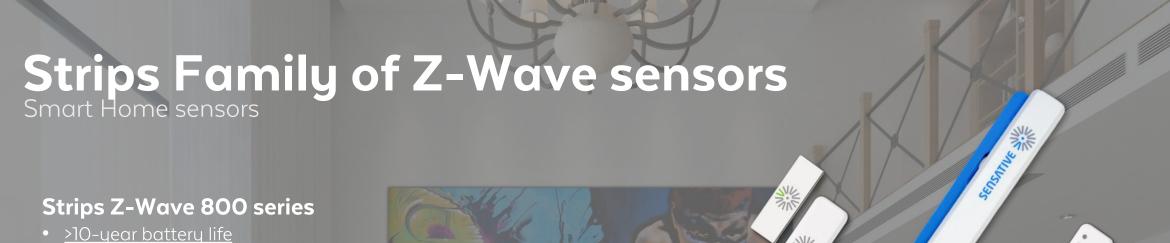


SENSATIVE SENSOR PORTFOLIO

USP: Small form factor, designed for interior environment and long battery lifetime >10 years
UNIQUE FEATURES: Oil leakage, indoor and outdoor positioning, Al powered digital nose and real time radon measurement







- 800m range (mesh)
- 1.5 miles range (Long Range/LR) SmartStart (fast and simple inclusion)
- S2 Security
- Compatible gateways

Three versions

- Guard magnet sensor for doors & windows
- Drip water leak & temp sensor, under sink, washing machines etc
- Comfort Monitor the room climate. Temp, humidity & ambient light. Use the slider button as a switch to turn on lights or any other action



3/1/5

Common features

- Ultra-thin (<3mm) & discreet
- Adhesive backing
- Life-time battery (10+ years)
- Long-range, up to 10 km/6 miles

Versions

- Comfort for indoor climate monitoring (T/H/LUX/M)
- Guard for open/close monitoring (M/t)
- Drip for water leak alerts (Cap/t)
- Oil for oil and water leak alerts (Cap/t)
- Presence for (desk) occupancy monitoring (IR/t/M)

Accessories

- Installer's toolkit
- +Clip

Strips Presence

Desk presence sensor

- Active IR sensor
- Detect presence up to 70 cm
- Magnet sensor (supports Switch)
- Temperature sensor (+/- 1 degree in room temp)
- OTA Configurable
- > 10 years battery life
- Supports Strips Switch to support applications as
 - Indicate when desk cleaning is done
 - Light control
 - etc
- LoRaWAN v1.0.4







SENSATIVE's LoRaWAN SENSORS w. GPS/WiFi Positioning & 3D Accelerometer



- Firmware with VSM (Virtual Sensor Machine)
- Downloadable sensor apps (OTA/NFC)
- Downloadable configuration (OTA/NFC)
- Battery options
- Sensor options



POSITION AWARE

- LR1110 chip-set
- Cloud supported positioning
- Outdoor (GPS/Beidou)
- Indoor (WiFi)



REMOTE

- UI
- Configurate
- Upgrade application
- Download AI models
- Over The Air (OTAA)
- Over NFC (Locally)
- Secure connection
- Device2Device connectivity
- Mesh connectivity



SMART

- Adaptable
- Programmable
- Pre-trained algorithms& Al models
- Built-in data memory

SQUARE ROOM SENSORS

only 58*58 mm with 7-15 years battery life



SQUARE COMFORT

Accurate T/H 750 mAh/4 Ah Ultra-slim – 7/15 mm thickness

SQUARE SOUND

Accurate T/H/, Ambient light, Sound Pressure Level 4 Ah Discreet - 15 mm thickness

SQUARE PRESENCE

Presence/Motion sensor Accurate T/H, Barometer, Ambient light 4 Ah Discreet - 15 mm From Q1-2025

SQUARE AIR

Air Q index, CO2e, bVOC Accurate T/H, Barometer, Ambient light, 6 Ah Discreet - 15 mm



SQUARE COMFORT

Room comfort sensor



• Accurate temperature (+/- 0.2° C) & Humidity (1.8% rH) sensors

Precision version available. Temp (+/- 0.1° C) & Humidity (1.0% rH)

Position-aware using WIFI positioning. (Optional cloud service)

VSM (Virtual Sensoring Machine) for sensor apps

Configuration and app uppgrades/change over LoRa

• NFC for configurations, FW upgrades & sensor status

750 maH battery for 10-15 years battery life

• 4 Ah battery version available

LoRaWAN (Semtech LR1110) v1.0.4

• 58*58*7 (15) mm, 750 (4000) mAh LiMnO2 built-in battery

• Mount with adhesive or screws



SQUARE SOUND

Room & sound level sensor



Sound Pressure Level (SPL) sensor (dB). Average and Maximum SPL

Alarms using SPL thresholds and wake on sound feature

• Excellent to use as room comfort sensor for heating control in offices, schools or homes.

• Accurate temperature (+/- 0.2° C) & Humidity (1.8% rH) sensors

Position-aware using WIFI positioning. (Optional cloud service)

- VSM (Virtual Sensoring Machine) for sensor apps
- Configuration and app uppgrades/change over LoRa
- NFC for configurations, FW upgrades & sensor status
- 4 Ah built-in battery for >> 10 years battery life
- LoRaWAN (Semtech LR1110) v1.0.4
- Mount with adhesive or screws

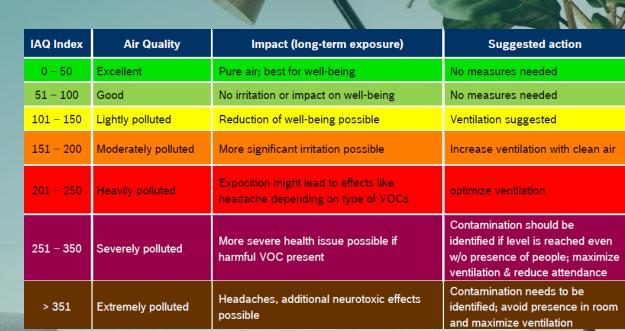


SQUARE AIR

Advanced room sensor



- Excellent to use as room air quality for ventilation control in offices, schools or homes.
- Measures Air Quality Index IAQ and bVOC (level of exhaled air breathable Volative Compounds)
- IAQ index as defined by Bosch (BME688). Weighted index based on multiple air contaminations.
- IAQ is a more expedient metric than CO2 for air quality and ventilation control
- Calculates CO2e (estimated CO2) based on bVOC levels.
- Square Air will not detect CO2 leakage from gas tanks, CO2 levels outdoors or any other CO2 from other sources than humans/animals breathing.
- Position-aware using WIFI positioning. (Optional cloud service)
- Temperature $(+/-0.2^{\circ} C)$, Humidity, Ambient light (Lux) & Air pressure
- NFC & VSM
- Est. 6-7 years continuous measurements (ULP mode 300 sec period).
 Up to 15 hours if used during office hours only.
 Quarterly reporting + alarms. SF7.
- LoRaWAN (Semtech LR1110) v1.0.4
- 58*58*15 mm, 6 Ah LiMnO2 built-in battery
- Mount with adhesive or screws







- Cloud assisted positioning using GPS, Beidou & WiFi
- Motion controlled by 3D accelerometer
- NFC for local access with mobile phone as UI
- Up to 10 years battery life @ hourly positioning
- Install with adhesive, screws, cable ties, key ring or wristband

Optional sensors include

- Temperature sensor
- Barometer (Air pressure) for 3D positioning indoors
- Wake-on-sound detector
- Water sensors (man overboard)
- Alarm button

RADAR

Parking space occupancy sensor

Distance sensor

- Level sensor for silos, tanks etc
- Snow level
- Waste bin and container levels

60 GHz pulsed coherent radar based on the Acconeer A111 sensor

0.3 - 6.8 m radar range with 10 mm accuracy

2 different lenses available for ±60 ° or 30° radar beam width

Temperature sensor

Position-aware using WIFI positioning. (Optional cloud service)

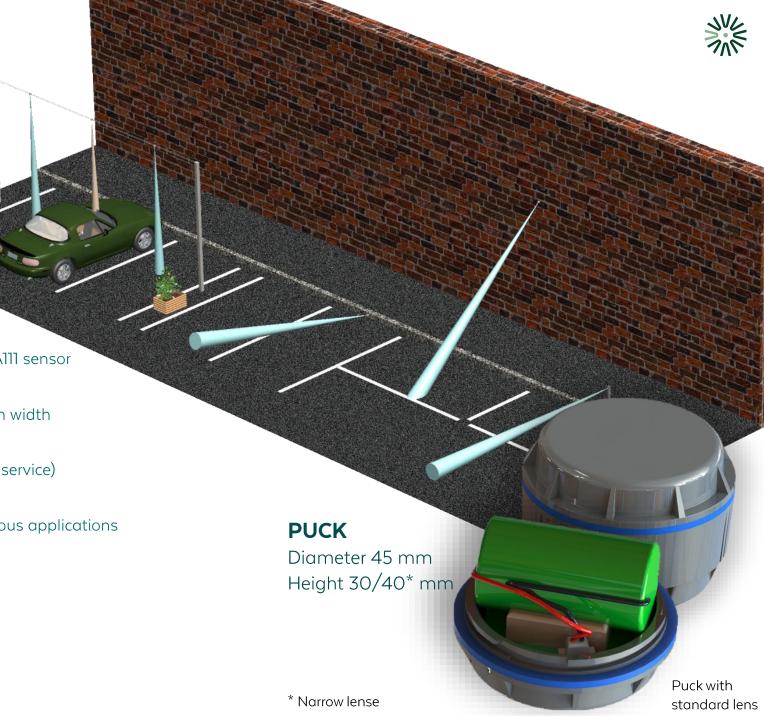
NFC & VSM

Downloadable & configurable radar algorithms for various applications

Up to 10 years battery life

IP67 with replaceable battery

IP69 permanently sealed closing available on demand



Use Case Example: Airport



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Airport asset tracking for Airport

Business case: Optimization of airport service operations through tracking of wheel chairs, passenger transportation and luggage carts.

Solution: Sensative Square Tracker, Yggio Platform combined with Combain Indoor Positioning Service and a Sensative End-user App.



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Use Case: Trains

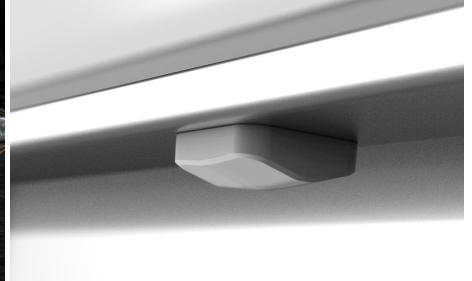


Seat occupancy solution

Business case: Revenue optimization for passenger trains through knowing actual occupancy which allows for additional sales of seats.

Solution: Sensative Prism Presence Sensor (radar) combined with the Yggio Platform.





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More Use Case Examples



Temperature Monitoring of Commercial Refrigerators & Cold Chains

Business case: Shop owners can avoid heavy penalties from health authorities and bad reputation in the market.

Solution: Sensative's Temperature Sensor with built-in data memory combined with the Yggio Platform, and a monitoring App.

Benefits:

- Securing safety of food or medicine
- Traceability of temperature history





Detection of Liquid Leakages

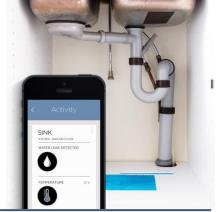
Business case: Avoidance of cost of any liquid leakage damages such as damaged property, generators, or oil spill.

Solution: Sensative Drip Sensor combined with the Yggio Platform and a monitoring App.

Benefits:

- Automatic water/machine shut off
- Reduced damage





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CREATING A SMARTER SOCIETY!

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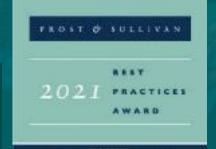








"MOST INNOVATIVE IOT COMPANY IN EUROPE 2021"



loT i

40-60%

IoT value lost without interoperability

(McKinsey)



250 000

Sensors delivered globally since 2015

>250

Customers being digitalized

>100

Customers running open unified IoT

EUROPEAN INTERNET OF THINGS SENSORS TECHNOLOGY INNOVATION LEADERSHIP AWARD