

# Smart Room Sensor

## LoRaWAN® connected Home and Office Environment Monitoring

The **Smart Room Sensor** integrates practical functionality into a very small form factor. The Smart Room Sensor is an ideal solution for holistically monitoring the home and office environment. The device is capable of measuring and reporting temperature, humidity, light, movement, motion, shock, detecting leaks, open / closed doors and windows. It also supports battery status updates for easy maintenance.

- Smart Home & Office
- Indoor Environment Monitoring
- Room Occupancy
- Facility Management
- Moisture/Leak Detection
- Desk Occupancy
- Point of Entry Security
- HVAC Optimization

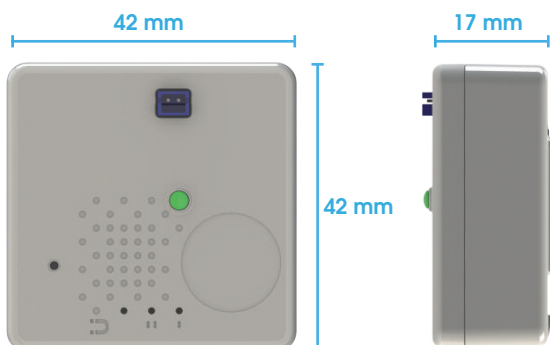


## Features

- » User Configurable Parameters and Thresholds
- » Designed for Optimal Battery Life
- » Multiple PIR Masking Options
- » Long Battery Life
- » Wall, Ceiling or Table Mount Configurations
- » Simple Deployment
- » Sleek and Unobstructed Design

## Applications

- » Movement Detect (Doors, Windows, Drawers)
- » G-Force Measurement (Settable Trigger)
- » Motion Detection (PIR)
- » On / Off External Contact
- » On / Off Internal Magnetic Switch
- » Pulse Reading (Water, Gas, other metering)
- » Light Detection (On / Off)
- » Temperature Measurement
- » Humidity Measurement
- » Moisture / Leak Detection



# KONA Smart Room Sensor

## LoRaWAN® connected Home and Office Environment Monitoring

### Technical and Functional System Specifications

#### General System Parameters

Operational Temperature	0°C to 60°C (10°C to 40°C optimal)
Storage Temperature	-30°C to 60°C (0°C to 30°C optimal)
Relative Humidity-Operational	5% - 95% Non-Condensing (Operational)
Ingress Protection	IP30
Size	42 x 42 x 17 mm (enclosure)
	42 x 42 x 20 mm (with bracket)
Weight (including batteries)	28g
Battery	CR2477
External Connector (Base Variant)	Connector Type: JST A02ZR02ZR28H305B
	≤ 20Hz (Pulse Reading)
	Driven by open drain/relay contact

#### Wireless Parameters

RF Power	14 dBm
RF Sensitivity	up to -137dBm
LoRa Radio	SX1261
Supported ISM Bands	NA915, EU868, EU433, AU915, AS923
	CN470, CN779, IN865, KR920, RU864
Antenna	Internal
LoRa Device Class	A

#### Sensor Variants

Sensor Function	PIR Variant	Base Variant
Motion Detection (PIR)	✓	
On/Off Magnet switch	✓	✓
Moisture/Leak Detection		✓
Accelerometer	✓	✓
G-Force Measurement	✓	✓
On/Off External Contact		✓
Light Detection	✓	✓
Temperature	✓	✓
Humidity	✓	✓

#### Optimized Battery Life (Years) - CR2477

Operational Temperature	20°C
Tx Power	14 dBm
Rx Cycle/Hour	1

Variant	Transmission	SF 10 125 kHz	SF 7 125 kHz	SF 8 500 kHz
Base	4 packets / hour	4.8	11.2	13.0
	3 packets / hour	5.9	12.5	14.1
	2 packets / hour	7.8	14.1	15.5
	1 packets / hour	11.0	16.3	17.1
	1 packets / day	18.5	19.0	19.1
PIR	4 packets / hour	2.2	4.0	4.4
	3 packets / hour	2.5	4.3	4.6
	2 packets / hour	3.0	4.6	5.0
	1 packets / hour	4.0	5.1	5.3
	1 packets / day	5.5	5.5	5.6

#### PIR Detection Range (Wall Mount)

X Angle	70°
Y Angle	20°
Z Range	5 m

#### PIR Detection Range (Ceiling Mount)

X Angle	70°
Y Angle	84°
Height	3 m

\* Assumes object in center of field of view

#### Regulatory Compliance

Safety	IEC 60950-1 (CE)
Regulatory	ETSI EN 300 220
	ETSI EN 301-489-1/-3
	FCC 15.247      FCC 15.209

Specifications subject to change without notice.

TEKTELIC Communications is a premier supplier of best-in-class LoRaWAN® IoT Gateways, Sensors, and custom applications. These elements combined provide a powerful end-to-end solution that can be easily, quickly, and cost effectively deployed to address the most demanding IoT challenges.

For more information please visit [www.tektelic.com](http://www.tektelic.com)