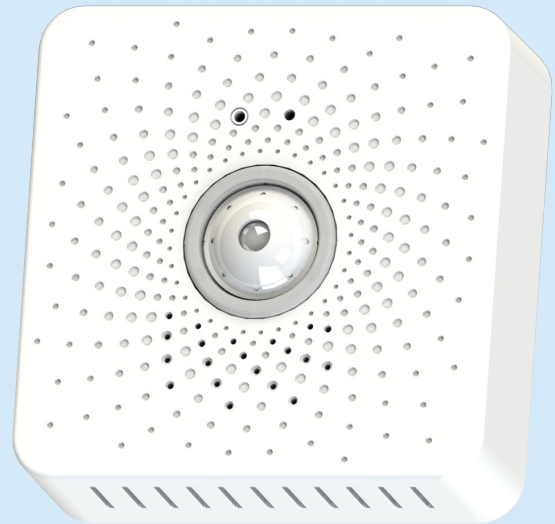


Smart Room Sensor - PIR & CO2

LoRaWAN® connected Indoor Ambient Environment Monitoring

The Smart Room Sensor CO2 + PIR integrates practical functionality into a very small form factor and when paired with an E-ink Display tablet, is an ideal solution for holistically monitoring ambient indoor environments. The device measures and reports real-time CO2 levels, temperature, humidity, light and motion detection in its surrounding environment. It can display measurements over Bluetooth via E-Ink Display Tablet. The sensor is optimized for long battery life and excellent wireless performance with deep indoor coverage capabilities in any home, school, office, enterprise or commercial environment. The device is fully configurable over-the-air by the user for custom applications, thresholds, trigger events and reports. The Smart Room Sensor CO2 supports autocalibration with settable intervals. Furthermore, the CO2 can be calibrated through the application or manually.



Features

- » User Configurable Parameters and Thresholds
- » Designed for Optimal Battery Life
- » Multiple PIR Masking Options
- » Pairable with E-Ink Display
- » Wall, Ceiling or Table Mount Configurations
- » Simple Deployment
- » Sleek and Unobstructed Design
- » Ambient Indoor Environment Monitoring
- » Buzzer Alert Notifications

Applications

- » Temperature
- » Humidity
- » Light
- » Barometric Air Pressure
- » CO2 Concentration
- » Motion Detection

Smart Room Sensor - PIR & CO2

LoRaWAN® connected Indoor Ambient Environment Monitoring

Technical and Functional System Specifications

General System Parameters

| | |
|-------------------------------|---|
| Operational Temperature | 0°C to 60°C |
| Storage Temperature | -40°C to 60°C |
| Relative Humidity-Operational | 5% - 95% Non-Condensing (Operational) |
| Ingress Protection | IP30 |
| Size | 80 x 80 x 30 mm (with mounting clip) |
| | 80 x 80 x 26 mm (without mounting clip) |
| Weight (including batteries) | 91g (with Battery) |
| Battery | 2x AA LTC |

Wireless Parameters

| | LoRa | BLE |
|---------------------|---|------------------|
| RF Power | 15 dBm | 0 dBm |
| RF Sensitivity | -137dBm | -94.8dBm (1Mbps) |
| Radio | SX1261 | EFR32BG13 (MCU) |
| Supported ISM Bands | All Regions Identified by LoRa Alliance | 2.4GHz ISM |
| Antenna | Internal | Internal |
| LoRa Device Class | A | / |

Sensing Functions

| |
|--|
| Temperature: 0-60C +/- 0.3C |
| Humidity: 5-95% +/- 4% |
| Light: 5-1000 lux |
| Human Motion Detection |
| CO2: 400-5000ppm +/- 30ppm +3% of reading |
| Barometer: 300 -1200 hPa +/- 1hPa |

Optimized Battery Life

| | |
|-------------------------|--------------------------|
| Operational Temperature | 15-25°C |
| Tx Power | LoRa: 15dBm BLE: 0dBm |

Battery Life in Years

| Report Frequency | SF 10 | SF 7 | |
|--------------------------|-------|------|--|
| Every 5 mins (active) | 4.1 | 6.5 | Active: 10 hours during weekdays |
| Every 1hr (Inactive) | | | |
| Every 5 Minutes (active) | 3.7 | 5.9 | Inactive: Rest of the week outside of active hours |
| Every 30 mins (Inactive) | | | |

PIR Detection Range (Ceiling)

| | |
|---------|----------------|
| X Angle | 104° (No mask) |
| Y Angle | 104° (No mask) |
| Height | 3 m (No mask) |

* Assumes object in center of field of view

Regulatory Compliance

| | |
|------------|----------------------------|
| Safety | IEC 60529-1 |
| Regulatory | ETSI EN 300 220 -1/-2 |
| | ETSI EN 301-489-1/-3 |
| | FCC 15.247 FCC 15.209 |
| | ICES-003, RSS-247, RSS-Gen |

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