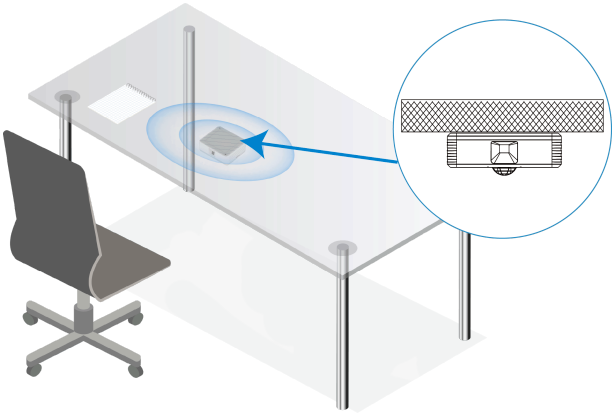
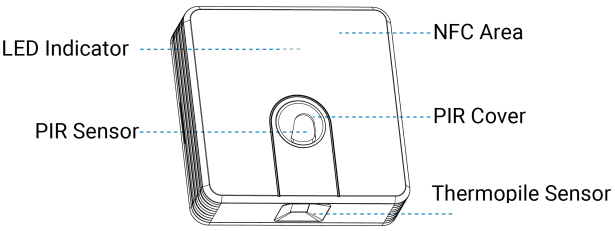
WORKSPACE SENSORS

LoRaWAN Desk & Seat Occupancy Sensor

Know which desks and seats are really in use, with PIR and thermopile detection and a ten-year battery.







Overview

The LoRaWAN Desk & Seat Occupancy Sensor mounts under a desk or table and reports whether the seat in front of it is occupied or vacant. A PIR element detects movement and a thermopile infrared sensor confirms the body heat of a seated person, so someone sitting still is still counted as present. Together they reach a recognition rate of up to 98%. Status is sent over LoRaWAN to ioX-Pulse, where live desk status and history are shown on your dashboards.

Four interchangeable PIR covers shape the detection zone to the furniture: a single desk, a face-to-face desk, a bar table or a round table. The sensor sticks or screws to the underside of the desk and runs for years on one replaceable battery. Occupied is reported the moment motion is seen; vacant after a configurable 15 second to 10 minute hold time.

Key Features

- **PIR plus thermopile.** Motion detection confirmed by a thermopile infrared sensor, for up to 98% recognition and fewer false vacancies when people sit still.
- **Four detection patterns in the box.** Snap-on PIR covers give 3.3 x 3.0 ft, 3.3 x 5.9 ft, 5.9 x 3.0 ft or 5.9 x 5.9 ft zones at a 27.6 in mounting height, or a blank cover tailored to another shape.
- **Fast and tunable reporting.** Occupied is sent immediately on detection; the vacancy hold time (15 to 600 s) and periodic report interval (1 to 1,440 min) are set to suit the space.
- **Years on one battery.** 4,000 mAh replaceable battery rated for over 10 years at SF7; remote configuration by LoRaWAN downlink; V0 flame retardant housing; tape or screw mounting.

Applications

- **Hot desking and flexible offices.** Show staff which desks are free right now and release booked desks nobody turned up to.
- **Space utilization.** Measure how desks and seats are actually used before resizing a floor or renewing a lease.
- **Libraries and study halls.** Let visitors find an open seat and see peak-hour demand by area.
- **Cafeterias, lounges and waiting areas.** Track seat turnover and plan cleaning around real use.

Technical Specifications

Occupancy Detection	
Technology	PIR and thermopile infrared
Recognition rate	Up to 98% (thermopile performs best between 50 and 86 °F)
PIR detection area	107° horizontal, 107° vertical, within 3.3 ft (1 m); shaped by the fitted PIR cover
Thermopile detection area	50° (at 50% sensitivity)
PIR covers (included)	Single desk 3.3 x 3.0 ft; face-to-face desk 3.3 x 5.9 ft; bar table 5.9 x 3.0 ft; round table 5.9 x 5.9 ft (at 27.6 in / 70 cm mounting height); blank cover can be tailored for other shapes
Reporting	Occupied reported immediately on detection; vacant after a hold time of 15 to 600 s (default 60 s); periodic status and battery report every 1 to 1,440 min (default 1,440)
LoRaWAN	
Protocol	LoRaWAN 1.0.2 and 1.0.3, Class A, OTAA or ABP
Frequency band	US915 standard; EU868, AU915, AS923, KR920, IN865, RU864, CN470 on request
Transmit power	20 dBm (915 MHz)
Sensitivity	-137 dBm
Antenna	Internal
Configuration	
Configuration	Remote configuration by LoRaWAN downlink
Power on / off	Internal power button
Indicator	1 x status LED (occupied and vacant transitions; can be disabled)
Power	
Battery	1 x 4,000 mAh ER18505 Li-SOCl2, replaceable
Battery life	Over 10 years at SF7; around 5.1 years at SF10 (US915, 1,440 min report interval, 100 triggers per day, LED off, 77 °F; laboratory figures)
Physical	
Size / weight	2.87 x 2.87 x 1.02 in (73 x 73 x 26 mm) without PIR cover; 3.2 oz (90 g)
Housing	White and gray PC + ABS, V0 flame retardant; IP30
Operating environment	-4 to 140 °F (-20 to 60 °C); 0 to 95% RH non-condensing
Mounting	Under the desk, 0 to 16 in (40 cm) from the table edge, thermopile pointed at the seat; 3M adhesive tape or screws (both included)
In the box	Sensor, 4 x PIR covers, 2 x mounting kits, 3M tape, quick start guide
Ordering	
LRW-COM-DSO01	Desk & Seat Occupancy Sensor with PIR and thermopile, US915

ioX-Pulse

Connect this sensor to ioX-Pulse to see live desk and seat status, occupancy history and battery level on your dashboards, and get email, SMS or in-app alerts when conditions change.

Start Your Free Trial

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