

MSP02

AI Occupancy Sensor

The AI Occupancy Sensor is a hardware component with an integrated optical sensor and PIR sensor for occupancy detection. The AI Occupancy Sensor enables intelligent person and object detection by using artificial intelligence to analyze and evaluate the images triggered by the sensor.



Market applications

This hardware component can be applied in numerous applications requiring occupancy analysis.

The AI Occupancy Sensor offers reliable occupancy detection using a combination of an optical sensor and a PIR module. The AI Occupancy Sensor enables intelligent person and object detection, in which the images triggered by the sensor are analyzed and evaluated using artificial intelligence in compliance with data protection regulations. The optical sensor can be triggered at fixed time intervals or ad hoc by the integrated PIR sensor when motion is detected.



Usage

- The data set is transmitted to an Locator Node gateway using Bluetooth Low Energy, and then securely relayed to the platform. Within the platforms, the image is analyzed in volatile memory using an AI model and the results are stored. The image is discarded and is not viewable at any time.
- The AI Occupancy sensors provide an additional benefit due to their simple and flexible installation process. The sensor, which operates on battery power and can record approximately 30,000 times before needing to be refilled, can be easily attached to room ceilings using the magnetic mount provided. This makes it suitable for analyzing occupancy and utilization patterns in offices, conference rooms, and other work environments. Additional applications include inventory management in industrial environments.

Specifications

Bluetooth version	Bluetooth® LE 5.0
Broadcast distance	100 ~ 150 meters (open space)
Battery	4 pcs AA batteries
Battery life	up to 30.000 images
Sensors	Passive Infrared Sensor (PIR Sensor) Bluetooth Low Energy (BLE) 5, 2.4 GHz
Tx power level	-40 dBm to +4 dBm
Working temperature	-10°C ~ 60°C
Working humidity	≤95%RH,Non-Condensing
Material	ABS plastic
Dimensions	Approx. 72 mm × 72 mm × 44 mm (L×W×H)
Weight	176 g (including batteries)
Installation mode	Base mounting

FCC warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC' s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body:
Use only the supplied antenna.

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