

# THE FUTURE OF SPACE INTELLIGENCE



## Occupancy Monitoring Technology



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## DIREK-D Edge Gateway

### Enhancing Connectivity and Intelligence

The DIREK-D Edge Gateway serves as the nerve centre for our sensor network, gathering data from DIREK-M sensors and other devices, and transmitting it to our AI-powered analytics engine.

### Product Feature Summary

- **Power Supply:** Supports 5V USB type-c.
- **Networking Protocols:** Compliant with various Wi-Fi and LTE standards.
- **Connectivity:** Offers Bluetooth 5.2, Zigbee3.0, Z-Wave, Wi-Fi 2.4/5G.
- **Ports:** Includes one WAN/LAN network port and one USB2.0 port.
- **Backup Power:** Equipped with a Li-battery for uninterrupted operation.

**Size:** Compact design, measuring 120 x 120 x 30 mm.



### Technical Specifications

- **CPU:** RK3328 Quad-core Cortex A53.
- **Power Supply:** USB Type-C 5V/3A.
- **Networking:** Flexible WAN/LAN interface.
- **Indicators:** Multiple LED indicators for power, wireless, and LTE status.
- **Antennas:** Integrated antennas for Zigbee/ BLE, Z-Wave, and Wi-Fi, Wireless connectivity, add LoRaWAN, CAT-1-LTE
- **Battery:** 5000mAh Li Battery.
- **Installation:** Versatile mounting options including flat, ceiling, and wall mounting.

### Compatible Products

- DIREK-M mmWave Occupancy Monitoring Sensors
- DIREK-DW Door and Window Sensors
- DIREK-B Temperature and Light Sensors

# DIREK-M Sensor

## Invisible Insight: Precision Occupancy Tracking with Total Privacy

The cutting-edge DIREK-M sensor is your ultimate solution for smart occupancy detection and monitoring. Designed for diverse environments like smart buildings, offices, retail spaces, and healthcare facilities, the DIREK-M redefines how you understand and utilise your spaces.

## Key Features & Advantages

### Unmatched Accuracy

Detects subtle activities, from breathing to typing. Ideal for comprehensive occupancy monitoring.

### Versatile Performance

Reliable in diverse conditions: low light, smoke, or fog. Operates where traditional sensors falter.

### Material Penetration

Monitors through obstacles like clothing or thin walls. Offers extensive coverage without direct line-of-sight.

### Privacy Preservation

No identifiable images captured. Ideal for privacy-sensitive environments.

### Compact and Unobtrusive

Sleek design (21mm length) that blends into any space.

### Real-Time Data Insights

Instantaneous processing for immediate occupancy data. Key to smart building management systems.

### Energy Efficient

Optimises energy use in buildings based on occupancy.

## How It Works?

### Radar Technology

DIREK-M sensors employ advanced radar technology to detect motion and presence, emitting millimetre-wave RF signals and analysing reflected waves.

### High-Frequency Sensing

Exceptional at detecting even minute movements with utmost precision.

### Non-Invasive Detection

Privacy-first approach, ensuring no visual images are captured.

## Diverse Applications

### Smart Building Management

Integrates with DIREK's D-XPRT platform for space and energy optimisation.

### Security & Safety

Monitors restricted areas for unauthorised access.

### Retail & Business Analytics

Tracks customer behaviour in stores.

### Healthcare

Monitors patients while ensuring privacy.

## Product Specifications

- **wireless Connectivity:** Bluetooth® LE.
- **Broadcast Range:** Up to 150 meters in open environments.
- **Radar Frequency:** 60GHz.
- **Installation Height:** 2.5m - 4.0m.
- **Horizontal Detection Angle:** 120°.
- **Detection Range:** up to 28 SQM
- **Coverage Area:** up to 28 SQM, 3 meters radius on the ground from ceiling installation.
- **Detection Height:** up to 28 SQM
- **Operating Conditions:** Temperature -10 to +60; Humidity ≤95%RH, non-condensing.
- **Power Supply:** DC12V.
- **Dimensions:** Main body 83x21mm; Mounting base 66x6.1mm.
- **Installation:** Ceiling-mounted, magnetic attachment.

