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WenzhiloT MTD285-ZB

WenzhiloT Zigbee 24GHz MmWave Radar Presence Sensor User Manual

Model: MTD285-ZB

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your WenzhiloT Zigbee 24GHz MmWave Radar Presence Sensor. This advanced sensor is designed for accurate human presence detection, including static presence and micro-movements, and integrates with smart home systems like Tuya Smart Life and Home Assistant via a Zigbee gateway.

Key Features

- **Advanced Human Presence Detection:** Utilizes mmWave Radar to detect human presence, static states (e.g., sleeping), micro-movements, and general movement within the detection area.
- **24GHz Radar Technology:** Offers faster response and more accurate detection compared to 5.8GHz versions, suitable for demanding scenarios.
- **Illuminance Monitoring:** Integrated light intensity sensor allows for smart scene linkage, such as automatic light control based on ambient brightness.
- **Magnetic Mounting Bracket:** Features a multi-angle magnetic bracket for flexible installation on iron surfaces or via double-sided adhesive on walls/ceilings.
- **Configurable Range Gate Settings:** Allows for setting detection sensitivity for specific distance partitions (range gates) within the application.
- **Debug Mode:** Provides a debug mode to optimize detection distance and eliminate interference sources.
- **Adjustable Reporting Functions:** Ability to turn on/off brightness, distance, and speed reporting to manage network traffic, especially for Zigbee2mqtt.
- **Zigbee Hub Integration:** Requires a Tuya Zigbee gateway (not included) for full functionality and integration into smart home ecosystems.

Package Contents

Please verify that all items listed below are present in your package:

- Presence Sensor x 1
- Mounting Bracket x 1
- Mounting Adhesive x 1
- 2m USB Cable x 1
- Reset Needle x 1
- User Manual x 1



Image: Contents of the product package, including the sensor, mounting accessories, and cable.

Specifications

Parameter	Value
Brand	WenzhiIoT
Model Number	MTD285-ZB
Power Source	Corded Electric (USB)
Frequency	24 GHz
Maximum Detection Range	8.4 Meters
Mounting Type	Wall Mount (Magnetic Bracket)
Compatible Devices	Tuya ZigBee gateway, ZigBee2mqtt
Item Dimensions (D x W x H)	2.76"D x 1.97"W x 2.36"H (70mm D x 50mm W x 60mm H approx.)



Image: Detailed dimensions of the sensor unit and its magnetic bracket.

24G vs 5.8G Version Comparison

The 24GHz version offers enhanced performance. Refer to the table below for key differences:



Image: Comparison of specifications between the 5.8GHz and 24GHz sensor versions.

Setup Guide

1. Powering the Sensor

Connect the provided USB cable to the sensor's power port and plug the other end into a suitable USB power adapter (not included).

2. Zigbee Hub Connection

This sensor requires a Zigbee hub (e.g., Tuya Zigbee gateway) to function. Ensure your Zigbee hub is powered on and connected to your network.

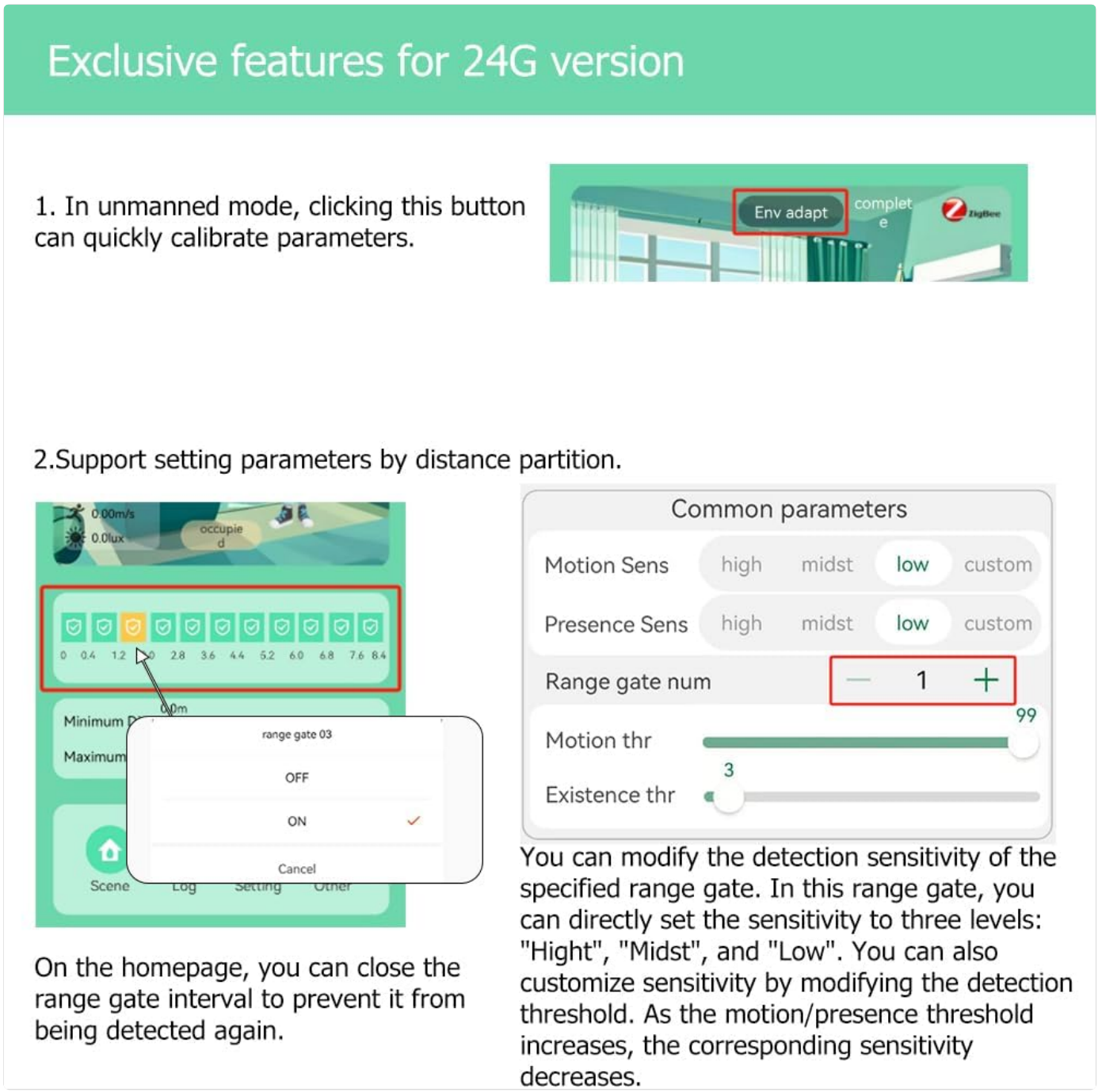


Image: The presence sensor and a Zigbee hub, illustrating the need for a hub.

3. Pairing with the Zigbee Hub

1. Open your Tuya Smart Life app or Home Assistant interface.
2. Initiate the device pairing process on your Zigbee hub.
3. Use the provided reset needle to press and hold the reset button on the sensor until the indicator light flashes, indicating pairing mode.
4. Once detected, follow the on-screen instructions in your app to complete the pairing.

4. Mounting the Sensor

The sensor comes with a magnetic bracket for flexible installation:

- **Direct Magnetic Attachment:** The sensor can directly attach to iron surfaces such as table corners, iron frames, or steel beams.
- **Adhesive Mounting:** For non-magnetic surfaces, attach the magnetic bracket to the desired location (wall or ceiling) using the provided double-sided adhesive. Then, magnetically attach the sensor to the bracket. The bracket

allows for angle adjustment to optimize detection coverage.

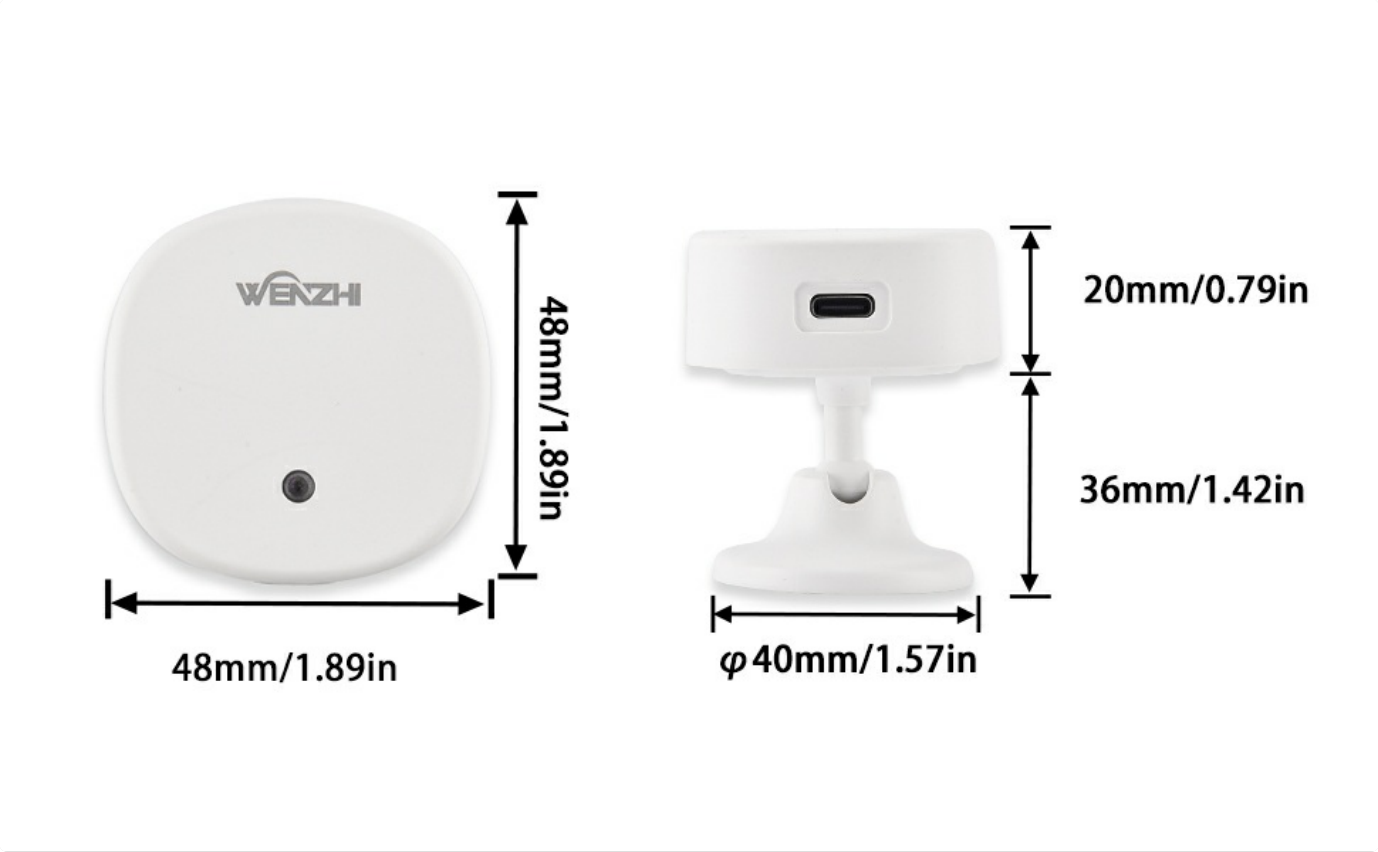


Image: Examples of magnetic and adhesive mounting options for the sensor.

Operating Instructions

Once the sensor is paired and mounted, you can configure and monitor it using the Tuya Smart Life app or your Home Assistant interface.

1. Human Presence Detection

The sensor continuously monitors for human presence, including static presence, micro-movements, and general motion. This data is reported to your Zigbee hub and accessible via the connected app.

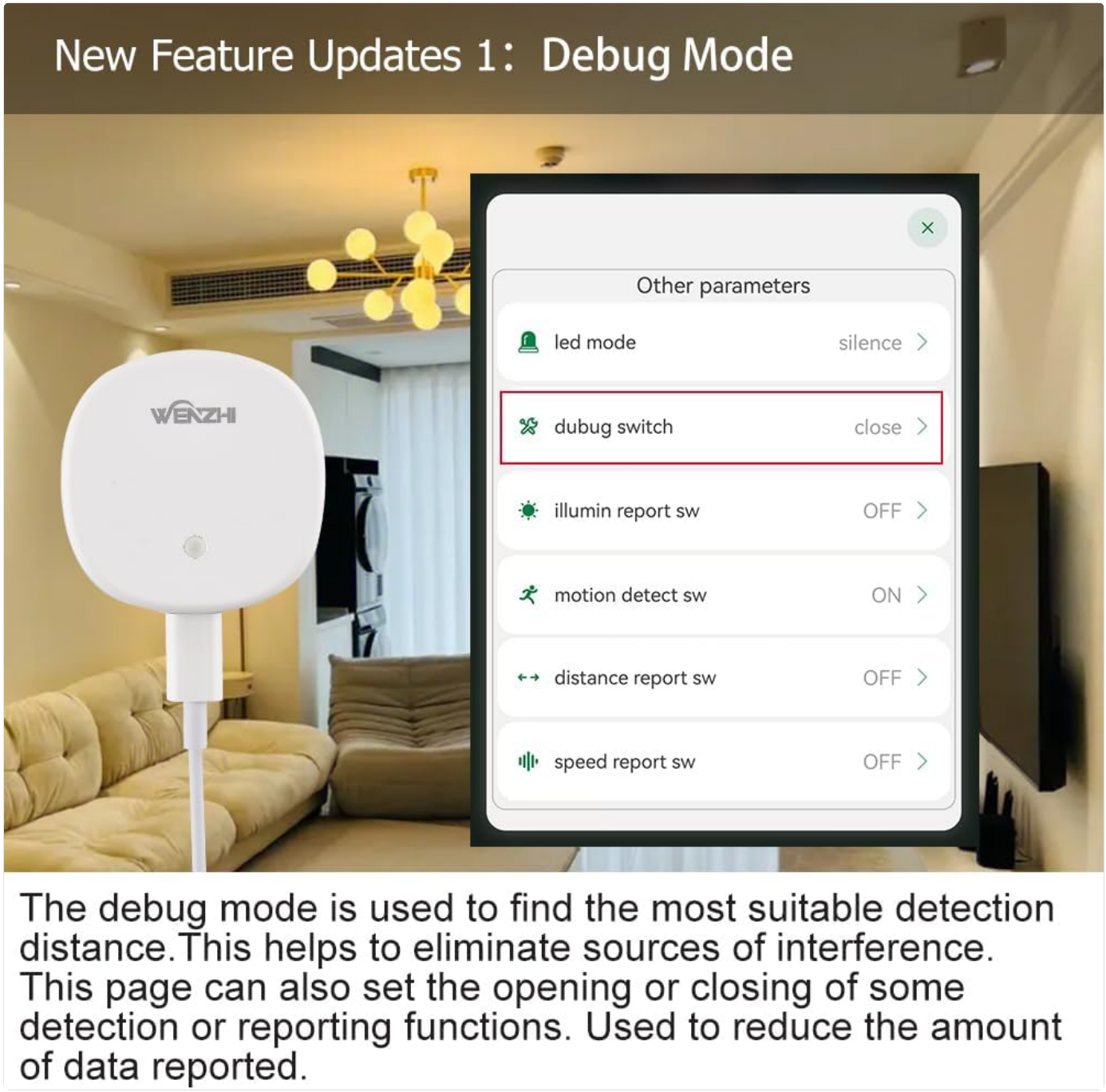


Image: App interface for setting multiple sensor parameters, including motion and presence sensitivity.

2. Illuminance Monitoring

The integrated illuminance sensor provides real-time light intensity data. This can be used to create smart automation rules, such as turning lights on or off based on ambient light levels.



Image: The sensor installed on a ceiling, demonstrating its illumination detection capability.

3. App Settings and Customization (24G Version)

The Tuya Smart Life app provides extensive options to customize the sensor's behavior:

- **Environment Adaptation:** In unmanned mode, click "env adapt" on the homepage to quickly calibrate parameters for optimal performance in your environment.
- **Range Gate Settings:** Adjust detection sensitivity for specific distance partitions. You can set sensitivity to High, Midst, Low, or custom thresholds for motion and existence detection.

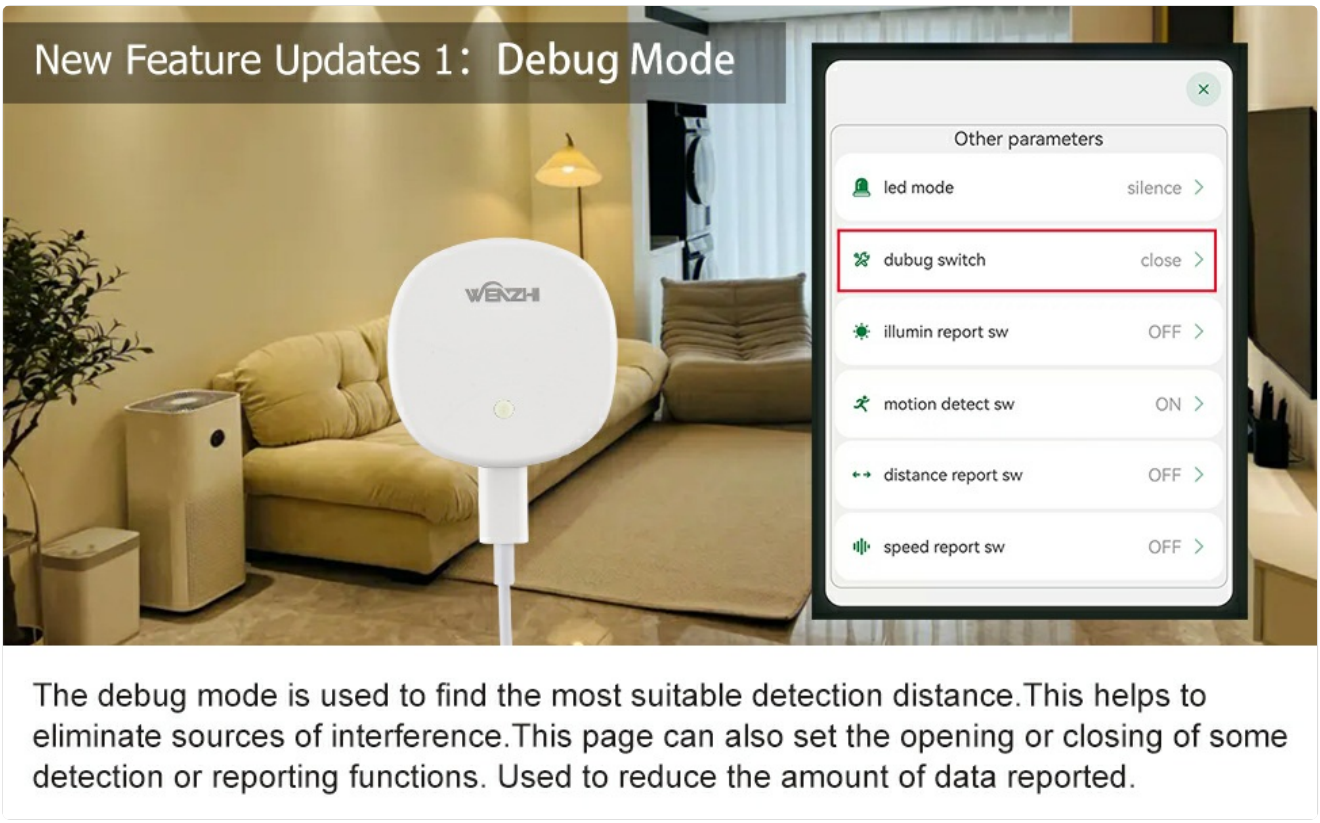


Image: App interface for configuring range gate settings and detection sensitivity.

- **Debug Mode:** Access the debug mode to fine-tune detection distance and identify potential interference. This section also allows enabling or disabling specific reporting functions.

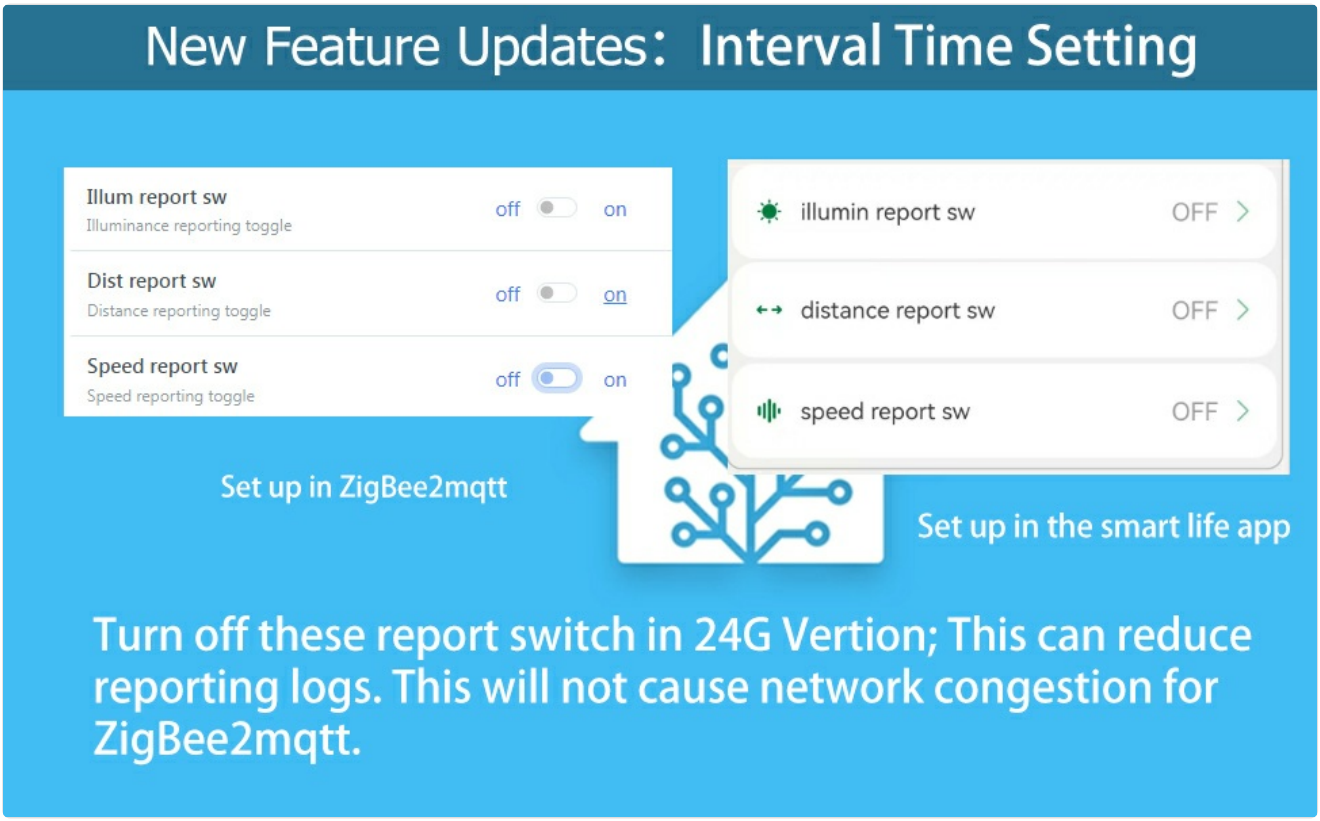


Image: App interface showing the debug mode and options to control various reporting functions.

- **Report Mode Settings:** You can independently enable or disable illuminance reporting, distance reporting, and speed reporting. Turning off unnecessary reports can reduce network congestion, especially beneficial for Zigbee2mqtt users.



Image: App settings for controlling illuminance, distance, and speed reporting to optimize network usage.

Maintenance

- **Cleaning:** Gently wipe the sensor's exterior with a soft, dry cloth. Do not use liquid cleaners or abrasive materials.
- **Environment:** Ensure the sensor is kept in a dry environment and away from direct water exposure.
- **Firmware Updates:** Periodically check the Tuya Smart Life app for any available firmware updates for your sensor to ensure optimal performance and access to new features.

Troubleshooting

Sensor is not detecting presence:

- Ensure the sensor is powered on and the indicator light is active.
- Verify the sensor is properly paired with your Zigbee hub.
- Check the detection range and sensitivity settings in the app. Adjust range gates and sensitivity levels as needed.
- Ensure there are no obstructions blocking the sensor's field of view.
- Use the debug mode in the app to fine-tune detection and identify interference.

Sensor is offline or not responding:

- Check the power connection to the sensor.
- Ensure your Zigbee hub is online and functioning correctly.
- Verify the distance between the sensor and the Zigbee hub. Excessive distance or interference can affect connectivity.

- Try re-pairing the sensor with the Zigbee hub if connectivity issues persist.

Excessive reporting or network congestion:

- Access the "Report Mode Settings" in the app and disable any unnecessary reporting functions (e.g., distance, speed reporting) if they are not required for your automation.
- Adjust the "report at trigger" setting if available to reduce log frequency.

Warranty and Support

WenzhiIoT products are designed for reliability and performance. For specific warranty details, please refer to the warranty card included with your product or contact WenzhiIoT customer support.
If you encounter any issues or have questions regarding your WenzhiIoT Zigbee 24GHz MmWave Radar Presence Sensor, please contact our customer support team through the retailer where you purchased the product or visit the official WenzhiIoT website for support resources.
For Home Assistant users requiring Zigbee2mqtt integration, if you need JS files for direct addition, please contact WenzhiIoT support.

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