



**VS370**

**Radar Human Presence Sensor**

**User Guide**

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# Chapter 1. Preface

## Copyright Statement

This guide may not be reproduced in any form or by any means to create any derivative such as translation, transformation, or adaptation without the prior written permission of Xiamen Milesight IoT Co., Ltd (Hereinafter referred to as Milesight).

*Milesight* reserves the right to change this guide and the specifications without prior notice. The latest specifications and user documentation for all Milesight products are available on our official website <http://www.milesight.com>

## Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. Milesight will not shoulder responsibility for any loss or damage resulting from not following the instructions of this operating guide.



### CAUTION:

Injury or equipment damage may be caused if any of these cautions are neglected.

- The device is not intended to be used as a reference sensor, and Milesight will not should responsibility for any damage which may result from inaccurate readings.
- The device must not be disassembled or remodeled in any way.
- Do not place the device close to objects with naked flames.
- Do not place the device where the temperature is below/above the operating range.
- Make sure electronic components do not drop out of the enclosure while opening.
- When installing the battery, please install it accurately, and do not install the reverse or wrong model.
- The device must never be subjected to shocks or impacts.
- In order to protect the security of the device, please change device password when first configuration. The default password is 123456.

## Revision History

Release Date	Version	Revision Content
Dec. 10, 2024	V1.0	Initial version

Release Date	Version	Revision Content
Oct. 15, 2025	V1.1	Battery pre-installed in the device and removed from packing list.

# Chapter 2. Product Introduction

## Overview

VS370 is a LoRaWAN<sup>®</sup> Radar Human Presence Sensor that adopts Millimeter Wave Radar and PIR technology. The sensor can detect human presence or slight movement and provide accurate human mobility statistics. Without any violation of privacy, VS370 has high detection accuracy with remarkable sensitivity, excellent algorithm performance, and exceptional precision.

As a Milesight D2D controller, the VS370 seamlessly communicates with other Milesight D2D devices, establishing more possible connections and paving the way for smoother operations. It can also be linked with lighting control and HVAC system to achieve an automated scene deployment where the lights, HVAC system and other associated devices turn on when someone enters the room.

With easy configuration and wireless detection, VS370 can be integrated with Milesight LoRaWAN<sup>®</sup> gateway and Milesight Development Platform, enabling remote and visual management of all sensor data.

VS370 can be used in various meeting rooms, conference rooms, and other spaces requiring monitoring of human presence.

## Key Features

- Equipped with Millimeter Wave Radar and PIR technology, it can identify human slight-movement and moving object
- Detachable and movable magnetic bracket with an additional 30° deflection angle to achieve full area coverage
- 100% privacy protection, no specific images will be captured
- Working well even in low-light or completely dark environments with great lighting adaptability
- Support the sensitivity configuration of PIR and radar sensors, allowing for the selection of different sensitivity levels based on actual scenarios
- Support Milesight D2D protocol to enable ultra-low latency and direct control without gateways
- Support customized hibernation periods to achieve flexible control and save battery power
- Easy configuration via NFC and Bluetooth
- Support management and OTA upgrade via Milesight Development Platform

# Chapter 3. Hardware Introduction

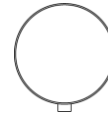
## Packing List



1 × VS370 Sensor



1 × Magnetic Bracket



1 × Bracket Adhesive



1 × Quick Start Guide



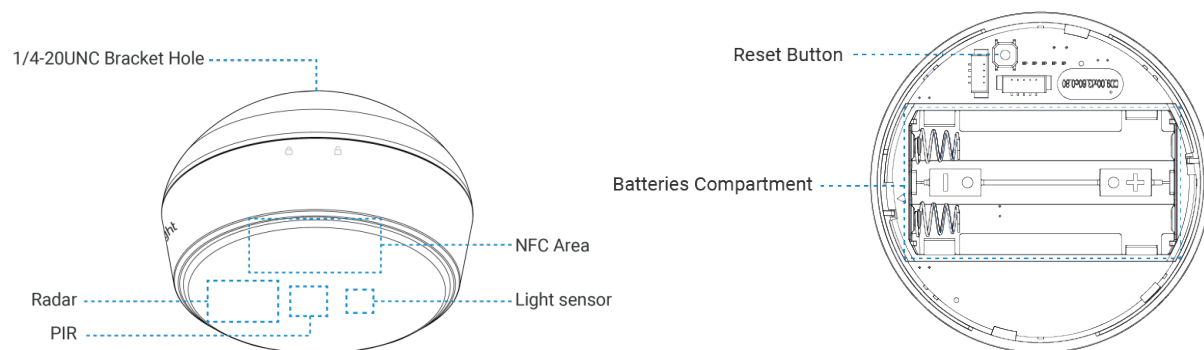
1 × Warranty Card



### Note:

If any of the above items are missing or damaged, please contact your sales representative.

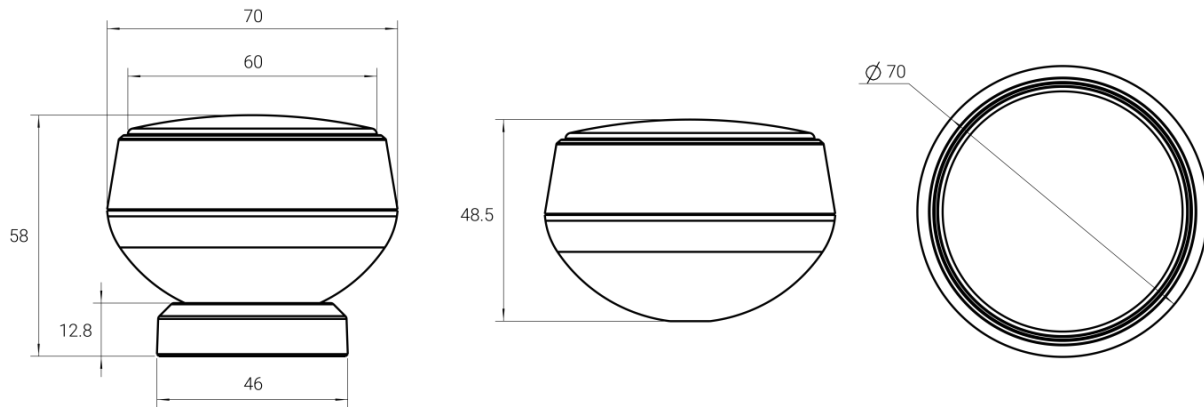
## Hardware Overview



## Button Descriptions

Function	Action
Power On/Off	Install the batteries
	Remove the batteries
Reboot	Press and hold reset button for over 3s
Reset to Factory Default	Press and hold reset button for over 10s

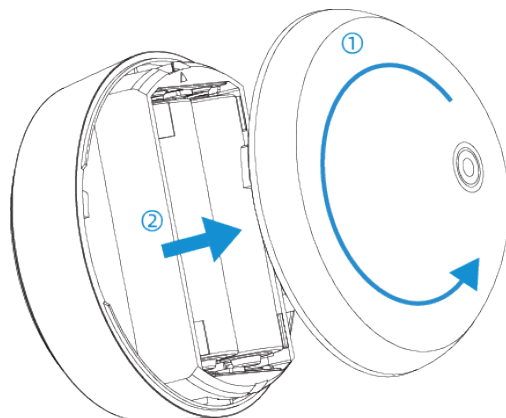
**Dimensions (mm)**



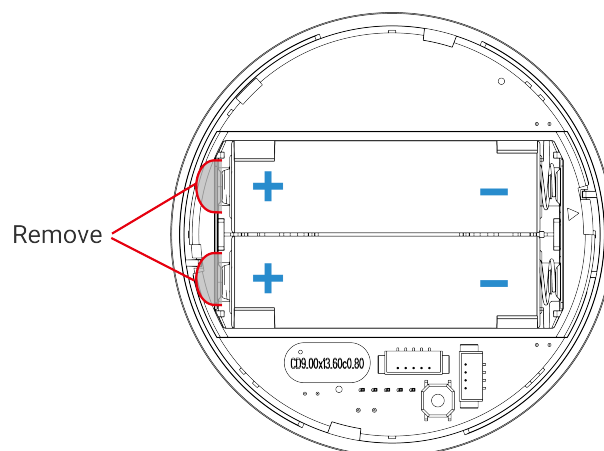


## Chapter 4. Power Supply

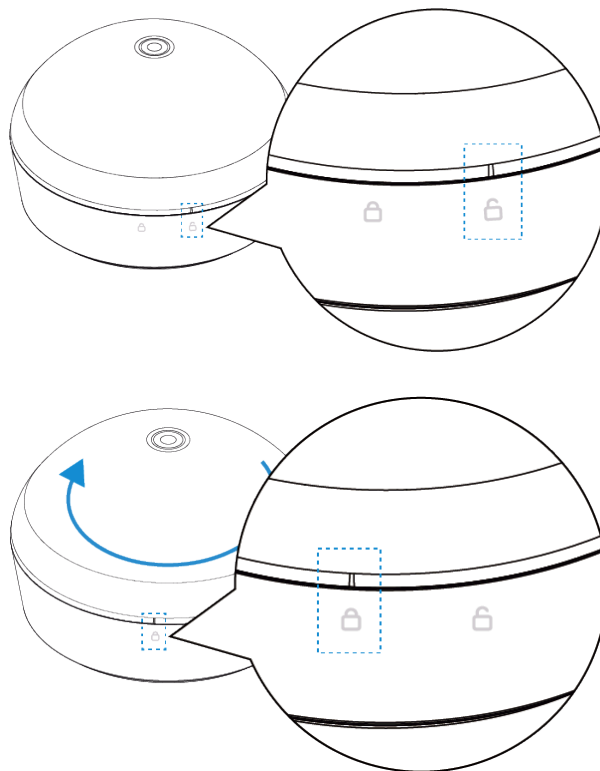
1. Hold the back cover and rotate counterclockwise.



2. Remove the battery sheet.



3. Align the mark with the unlock logo, then rotate to the left to secure the back cover.



**Note:**


- The device can only be powered by ER14505 Li-SOCl<sub>2</sub> batteries and does not support the use of alkaline batteries.
- If the device is not used for a long period of time, please remove the batteries, otherwise it may cause battery leakage and damage to the internal components.
- When replacing batteries, ensure all batteries are newest; otherwise, it may shorten battery life or cause inaccurate power calculations.

# Chapter 5. Quick Start

After the device is powered on, it can be configured via Bluetooth or NFC. Bluetooth is recommended for the first time installation.

## Access the Sensor via Bluetooth

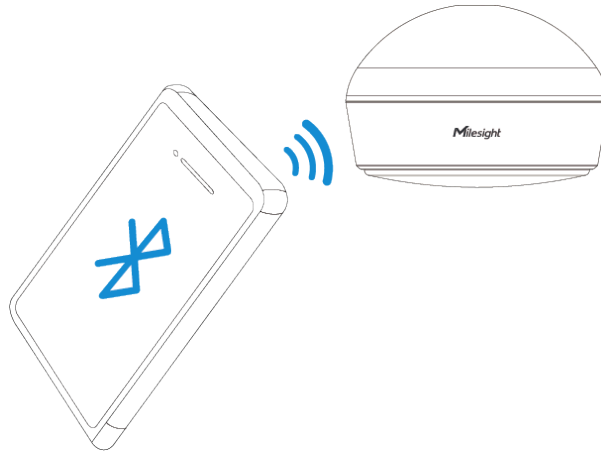
This section describes how to access the status and configuration page of the device via Bluetooth.

1. Download and install “Milesight ToolBox” App from Google Play or Apple Store on an Bluetooth-supported smartphone.
2. Enable Bluetooth and location functions on the smartphone.
3. Launch Milesight ToolBox, and select the default mode as Bluetooth.
4. Click  to scan the devices around and select the target device to connect. The default Bluetooth name is model -XXXXXX (5<sup>th</sup> to 11<sup>st</sup> of device SN) and the default device password is 123456.
5. After connected, the basic information, data, and settings of the device will be shown on the Milesight ToolBox App if it's recognized successfully.
6. Adjust the settings on the App, then click **Write** to write the settings. After writing, reread the device to check if the configuration is written well.




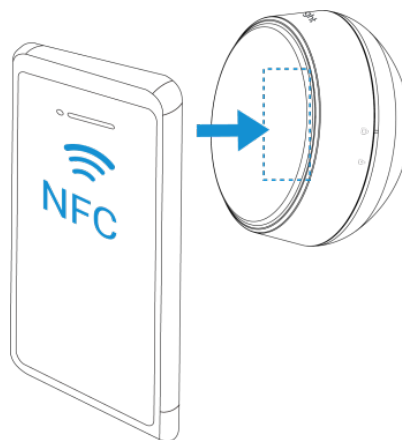
### Note:

- The Bluetooth connection will be terminated if there's no data interaction within 3 minutes. Please connect again.
- The device can connect to only one phone via Bluetooth. For example, if the device is connected to smart phone A via Bluetooth, the connection will be terminated after it is connected to smartphone B.
- The default device password is 123456. Please change a new password for security.



### Access the Sensor via NFC

1. Download and install "Milesight ToolBox" App from Google Play or Apple Store on an NFC-supported smartphone.
2. Enable NFC function on the smartphone.
3. Launch Milesight ToolBox, and select the default mode as NFC.
4. Attach the smart phone with NFC area to the device and click  to read device information. Basic information, data, and settings of the device will be shown on the Milesight ToolBox App if it's recognized successfully.
5. Adjust the settings on the App, then attach the smartphone with NFC area to the device and click **Write** to write the settings. After writing, reread the device to check if the configuration is written well.





**Note:**

- Ensure the location of smartphone NFC area and it's recommended to take off phone case.
- If the smart phone fails to read/write configurations via NFC, keep the phone away and back to try again.
- The default device password is 123456. Please change a new password for security.

## Configure the Network Setting

1. Go to **Network** settings page, select the join type as OTAA or ABP as required.



**Note:**

OTAA mode is required if you connect device to Milesight Development Platform.

2. Select supported frequency the same as LoRaWAN<sup>®</sup> gateway.



**Note:**

Set the channel index as 8-15 for US915 or AU915 if using default settings of Milesight gateways.

Device

Network

LoRaWAN

\* Support Frequency

US915

Enable Channel Index ⓘ

8-15

Index	Frequency/MHz ⓘ
0 - 15	902.3 - 905.3
16 - 31	905.5 - 908.5
32 - 47	908.7 - 911.7
48 - 63	911.9 - 914.9
64 - 71	903 - 914.2

3. Keep other settings by default and click **Write** to save the settings.

## Chapter 6. Operation Guide

### LoRaWAN<sup>®</sup> Settings

Configure AppEUI, Join Type, Application Key, and other information. You can also keep all the default settings.

Device EUI

24E124824E308175

\* APP EUI

24e124c0002a0001

\* Application Port


85



LoRaWAN Version

V1.0.3


Work Mode

Class A

Parameters	Description
Device EUI	Unique ID of the device which can be found on the device. <div> <b>Note:</b> please contact sales for device EUI list if you have many units.</div>
App EUI	The default App EUI (join EUI) is 24E124C0002A0001.
Application Port	The port used for sending and receiving data, the default port is 85.
LoRaWAN <sup>®</sup> Version	V1.0.2 and V1.0.3 are available.
Work Mode	It's fixed as Class A.
Confirmed Mode	If the device does not receive ACK packet from network server, it will resend data once.
Join Type	OTAA and ABP mode are available.

Parameters	Description
	 <b>Note:</b> it's necessary to select OTAA mode if connecting device to Milesight Development Platform.
Application Key	Appkey for OTAA mode, default value: "Device EUI" + "Device EUI" (since Q4 of 2025). Example: 24e124123456789024e1241234567890   <b>Note:</b> <ul style="list-style-type: none"> <li>• The default value of earlier devices is 5572404C696E6B4C6F52613230313823.</li> <li>• Please contact sales before purchase if you require random App Keys.</li> </ul>
Network Session Key	Nwkskey for ABP mode, the default is 5572404C696E6B4C6F52613230313823.
Application Session Key	Appskey for ABP mode, the default is 5572404C696E6B4C6F52613230313823.
Device Address	DevAddr for ABP mode, default is the 5 <sup>th</sup> to 12 <sup>th</sup> digits of SN.
Rejoin Mode	Reporting interval ≤ 35 mins: the device will send a specific number of LinkCheck-Req MAC packets to the network server every reporting interval or every double reporting interval to validate connectivity; If there is no response, the device will re-join the network.  Reporting interval > 35 mins: the device will send a specific number of LinkCheck-Req MAC packets to the network server every reporting interval to validate connectivity; If there is no response, the device will re-join the network.



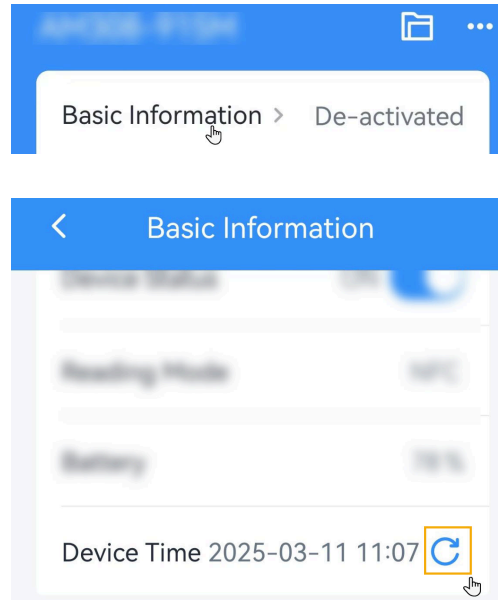
Parameters	Description
	 <b>Note:</b> <ol style="list-style-type: none"> <li>1. Only OTAA mode supports rejoin mode.</li> <li>2. The actual sending number is <b>Set the number of packets sent +1</b>.</li> </ol>
Channel Mode	Select <b>Standard-Channel</b> mode or <b>Single-Channel</b> mode. When <b>Single-Channel</b> mode is enabled, only one channel can be selected to send uplinks.
Supported Frequency	<p>Enable or disable the frequency to send uplinks. If frequency is one of CN470/AU915/US915, enter the index of the channel to enable in the input box, making them separated by commas.</p> <p><b>Examples:</b></p> <p>1, 40: Enabling Channel 1 and Channel 40</p> <p>1-40: Enabling Channel 1 to Channel 40</p> <p>1-40, 60: Enabling Channel 1 to Channel 40 and Channel 60</p> <p>All: Enabling all channels</p> <p>Null: Indicate that all channels are disabled</p>
ADR Mode	Enable or disable network server to adjust Spreading Factor, Bandwidth and Tx Power to optimize data rates, airtime and energy consumption in the network.
Spreading Factor	If ADR mode is disabled, the device will send uplink data following this SF parameter. The higher the spreading factor, the longer the transmission distance, the slower the transmission speed and the more the consumption.
Tx Power	Tx power (transmit power) refers to the strength of the outgoing signal transmitted by the device. This is defined by LoRa alliance.
RX2 Data Rate	RX2 data rate to receive downlinks or send D2D commands.
RX2 Frequency	RX2 frequency to receive downlinks or send D2D commands. Unit: Hz

## Time Synchronization

This section describes how to sync the time of the device.

### Sync via ToolBox App

After reading the device via Milesight ToolBox App, sync the device time with time zone from the smart phone.



### Sync via Network Server

This requires to ensure the LoRaWAN<sup>®</sup> network server supports device time synchronization feature. Example: Milesight gateway embedded NS.

1. Set the LoRaWAN<sup>®</sup> version of the device to V1.0.3.
2. Connect the device to the network server. After joining the network, the device will send a DeviceTimeReq MAC command to enquire the time from network server.



#### Note:

- This only supports to get the time but not time zone. The time zone can be configured by ToolBox App or downlink command.
- The device will send the DeviceTimeReq command every 5 days since the last sync.

## General Settings

11:56

Setting

Set Template

Device

Network

General

Reporting Interval(min)

10

Occupancy Trigger Sensitivity ⓘ

High

Occupancy Maintaining Sensitivity ⓘ

Middle

Hibernate Period ⓘ

00:00 — 00:01

⌚

⏻

00:00 — 00:01

⌚

⏻

Time Zone

UTC+8 (CT/CST: China St...)

Daylight Saving Time

⏻

Time to Report Vacancy(min) ⓘ

1

Illuminance Collection

⏻

Change Password

⏻

Read

Write

Parameters	Description
Reporting Interval	The time interval for reporting people counting data and battery level to the network server. Default: 10 minutes. Range: 1~1440 min
Occupancy Trigger Sensitivity	Adjust the responsiveness of the device to occupancy events. Higher sensitivity leads to quicker triggers but increases the probability of false triggers.
Occupancy Maintaining Sensitivity	Control the time and accuracy for maintaining the operational state after detecting presence. Higher sensitivity makes it easier to detect slight movements and maintain the occupied state.
Hibernate Period	Disable or enable Hibernate mode and configure the Hibernate Period. It will stop detecting and reporting when hibernating.
Time Zone	Set the time zone of the current location. When you click <b>Sync</b> button of Tool-Box App to sync time, the device will also sync the time zone from smart-phone automatically.
Daylight Saving Time	Enable or disable Daylight Saving Time (DST). <b>Start Time:</b> the start time of DST time range. <b>End Time:</b> the end time of DST time range. <b>DST Bias:</b> the DST time will be faster according to this bias setting.
Time to Report Vacancy(min)	After being released from the occupied state, it needs to wait for the idle time. If no occupancy is detected again during the idle time, the space will be considered as vacancy and the device will report a Vacant report. Default: 3min, Range: 1~60min.
Illuminance Collection	Enable or disable light intensity collection. Default: Bright status $\geq 700$ lux; Dim status $\leq 300$ lux.

Parameters	Description
	When the value is higher than 700 lux, the device will report status as Bright; when the value is lower than 300 lux, the device will report status as Dim.
Change Password	Change the password for ToolBox App to write this device.

## Milesight D2D Settings

Milesight D2D protocol is developed by Milesight and used for setting up transmission among Milesight devices without gateway. When the Milesight D2D settings is enabled, the device can work as a D2D controller to send control commands to trigger Milesight D2D agent devices.

1. Configure the RX2 datarate and RX2 frequency.



**Note:**

It is suggested to change the default values if there are many LoRaWAN<sup>®</sup> devices around.

Device

Network

LoRaWAN

D2D

Spreading Factor ⓘ

SF12-DR0

TXPower

TXPower0-16 dBm

RX2 Data Rate ⓘ

DR0 (SF12, 125 kHz)

RX2 Frequency ⓘ

869525000

2. Enable Milesight D2D feature and define a unique D2D key that is the same as Milesight D2D agent devices. (Default D2D key: 5572404C696E6B4C6F52613230313823)

Device

Network

LoRaWAN

D2D

Enable

☒

D2D Key

\*\*\*\*\*

3. Enable one of statuses and configure 2-byte hexadecimal Milesight D2D command.



**Note:**

- If you enable **LoRa Uplink**, a LoRaWAN<sup>®</sup> uplink packet that contains corresponding alarm status will be sent to gateway after the Milesight D2D command packet. Otherwise, the alarm packet will not send to LoRaWAN<sup>®</sup> gateway.
- If you enable the **Control Time** setting, Milesight D2D agent devices will take corresponding actions within this duration after receiving commands from Milesight D2D controller. This feature is currently under development for Milesight D2D agent devices.

**Example**

When the device detects the “Occupied” status, it sends D2D command 0002 to Milesight D2D agent devices, which perform the corresponding action for 5 minutes.

LoRaWAN

D2D

Occupied
☒

Control command

LoRa Uplink ⓘ
☐

Control Time(min) ⓘ
☒

---

Vacant
☐

Bright
☐

Dim
☐

Occupied/Bright
☐

Occupied/Dim
☐

## Maintenance

### Upgrade

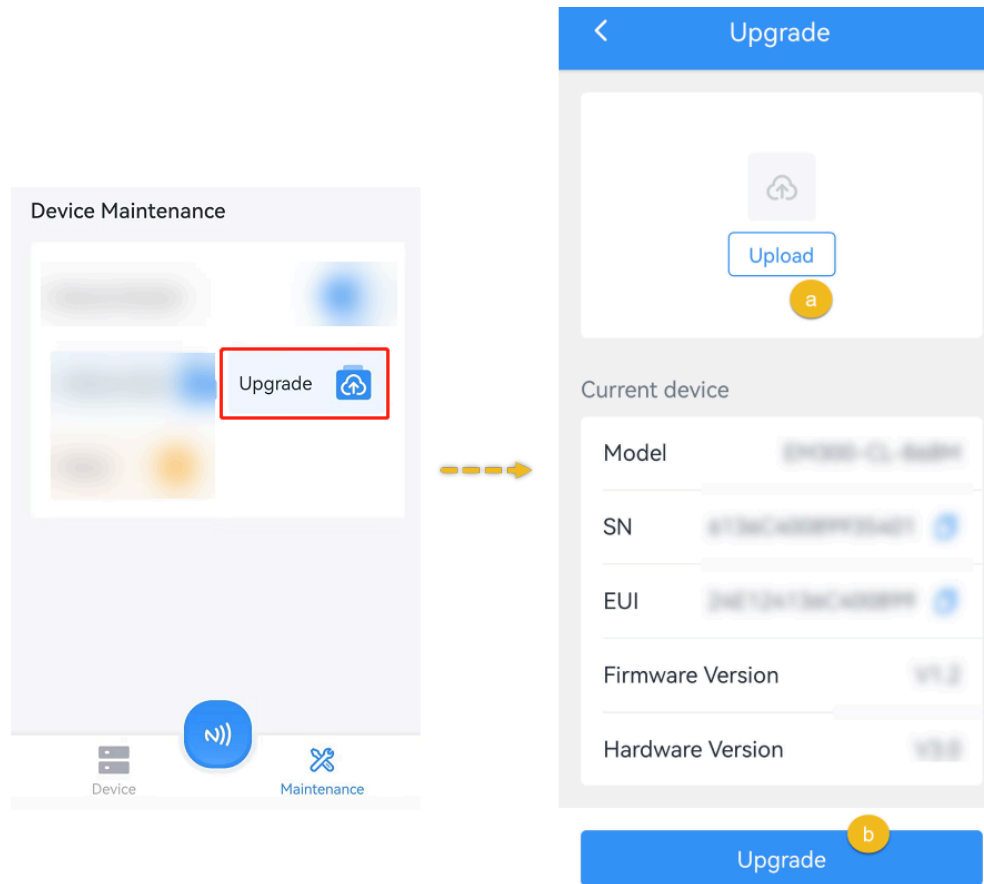
This chapter describes the steps to upgrade the device via ToolBox App.

1. Download firmware from Milesight official website to your smartphone.
2. Read the target device via ToolBox App, click **Upgrade** to upload the firmware file.
3. Click **Upgrade** to upgrade the device.



**Note:**

Operation on ToolBox is not supported during an upgrade.



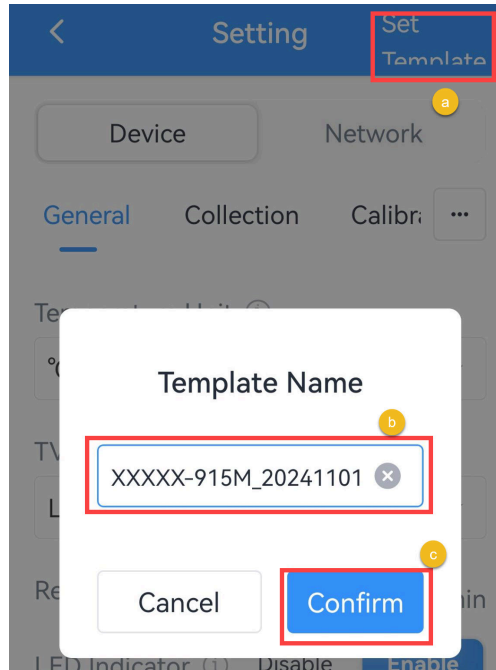
## Backup and Restore

This device supports configuration backup for easy and quick device configuration in bulks. Backup and restore is allowed only for devices with the same model and frequency band.

### Backup and Restore

1. Launch ToolBox App, attach the NFC area of smartphone to the device to read the configuration.
2. Edit the configuration as required, click **Set Template** to save current configuration as a template to the ToolBox App.

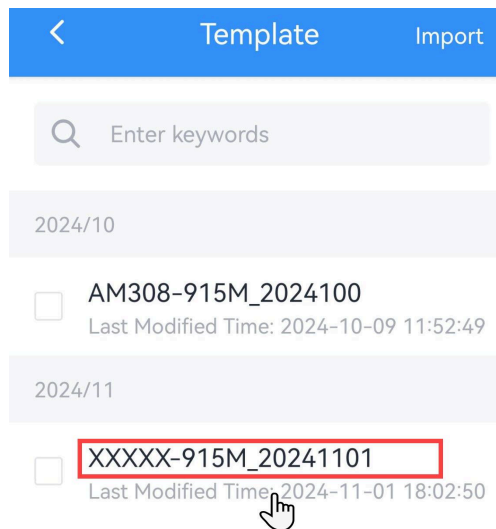




3. Go to **Device >Template** page.

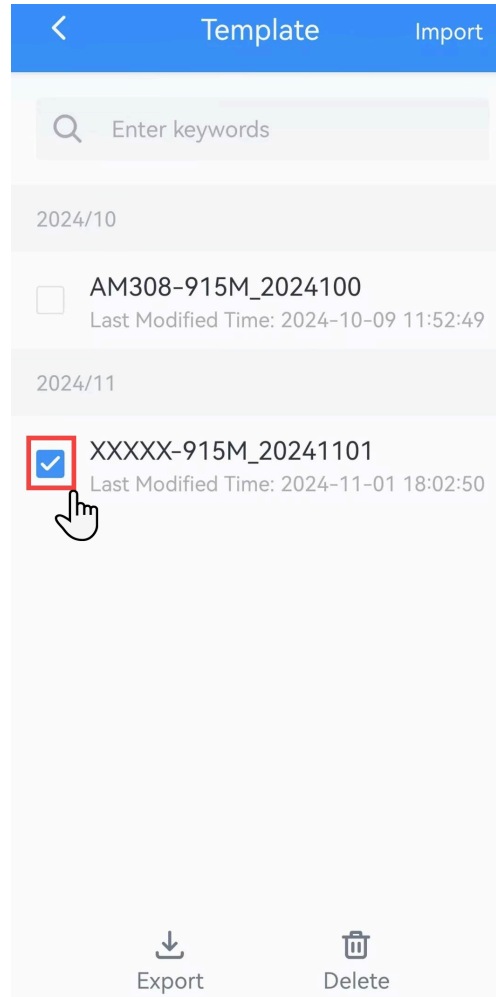


4. Select and click the target template, click **Write** to import the configuration to target devices.



## Export and Delete Template

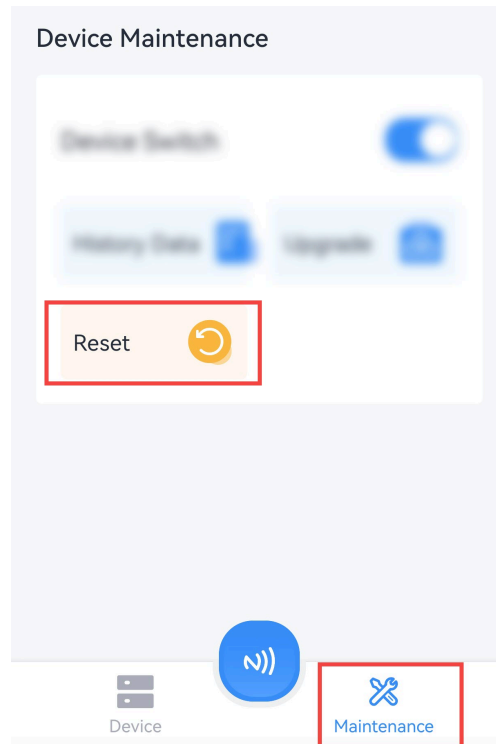
1. Check the box of the target template.
2. Click **Export** to export this template as JSON format file and save it to the smartphone, click **Delete** to delete this template from your ToolBox App.



## Reset to Factory Default

**Via Hardware:** Hold on the reset button for more than 10s until the LED indicator quickly blinks.

**Via ToolBox App:** Click **Reset** and attach the smartphone to device to reset the device.



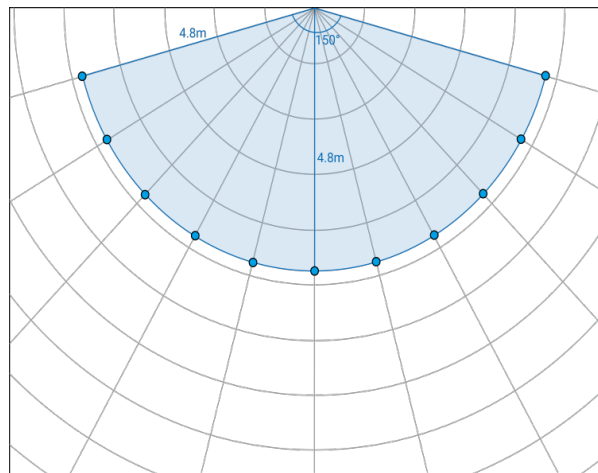
# Chapter 7. Installation

## Detection Range

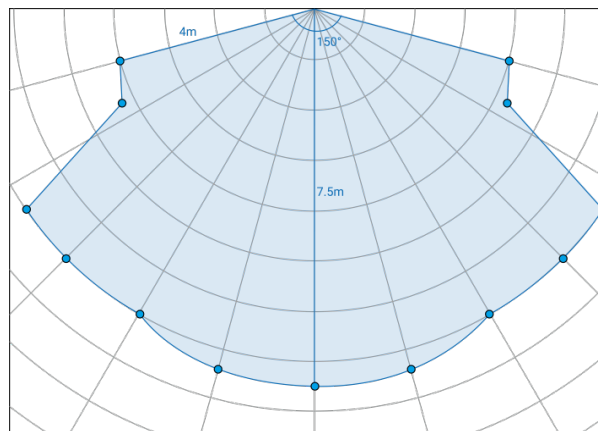
VS370 will use PIR to detect the movement first and then trigger the radar to turn on to detect the occupancy status.

**Condition:** Installation Height=2.7m, Angle=75°.

Slight Movement Detection Range:



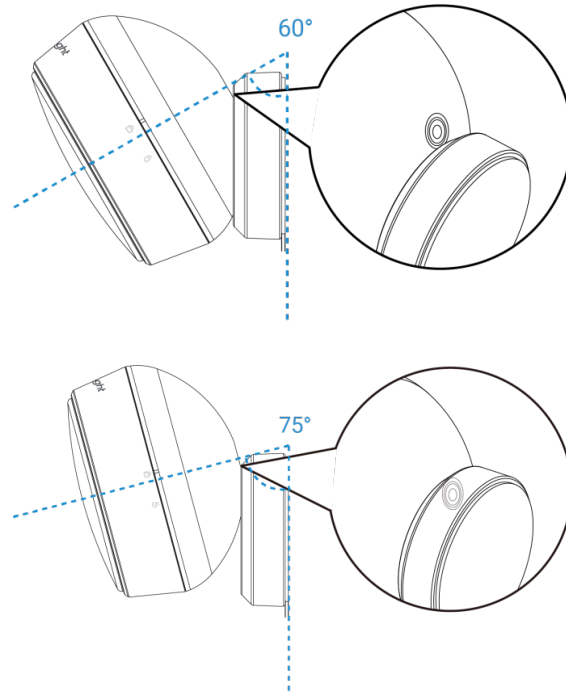
Movement Detection Range:



## Installation Location

**Location:** On a wall at a height of 2.5 to 3 meters. Ceiling installation is not supported.

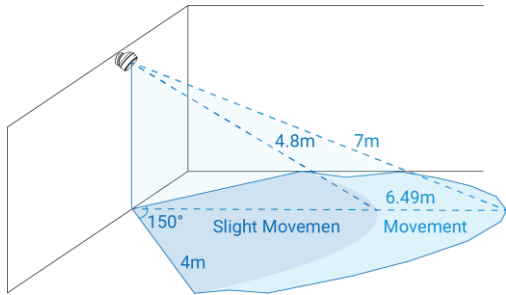
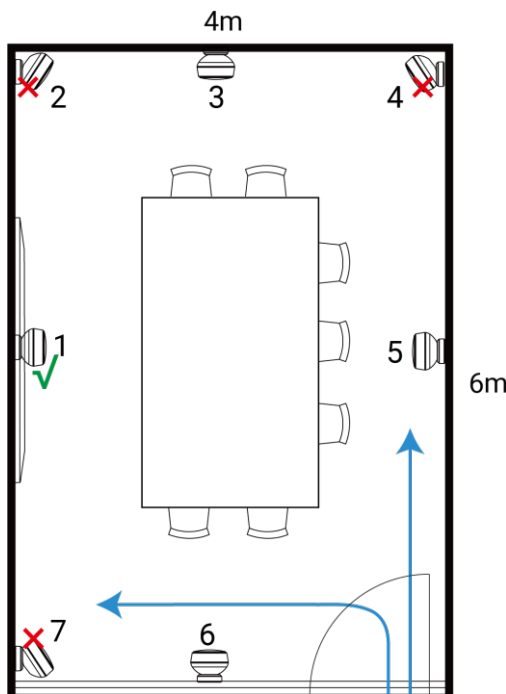
**Tilt angle:** 60° or 75° is recommended.



**Recommended Installation Location:**

Small meeting room (area≤4m*4m): height 2.5m, angle 60°.	
Detection Range	
Recommended Installation Location	

Installation Note	<ol style="list-style-type: none"> <li>1. It is recommended to install the device directly opposite the usual seating position (Position 3). It is not recommended to install it behind the seating position (Position 1).</li> <li>2. If one side of the conference room is made of glass, please install the device on the glass side (Position 4). It is not recommended to install it on the opposite side (Position 2).</li> </ol>
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Medium-sized conference room (between 4m*4m and 6m*6m): height 2.6m, angle 75°.	
Detection Range	
Recommended Installation Location	

Installation Note	<ol style="list-style-type: none"> <li>1. If there is a display within the detection range, it is recommended to install the device above the display (Position 1).</li> <li>2. It is recommended to install the device in front of the usual seating position (Position 1). It is not recommended to install it behind the seating position (Position 5).</li> <li>3. Avoid installing the device in the corners of the conference room (Positions 2/4/7).</li> <li>4. It is not recommended to install the device on the walls along the usual walking paths. If there is no other option, please adjust the angle to 60° (Positions 5/6).</li> <li>5. If one side of the conference room is made of glass, please install the device on the glass side (Position 6). It is not recommended to install it on the opposite side (Position 3).</li> </ol>
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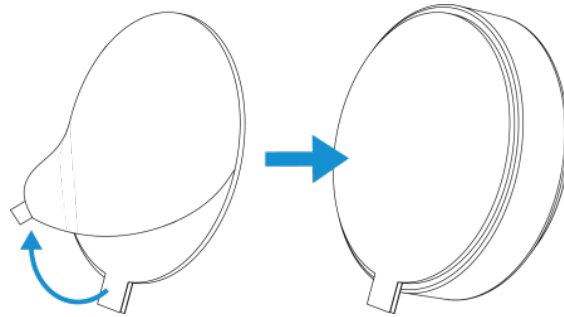
For large meeting rooms (area≥6m\*6m): for any requirements, please contact a pre-sales or sales representative to arrange a solution evaluation.

## Installation Steps

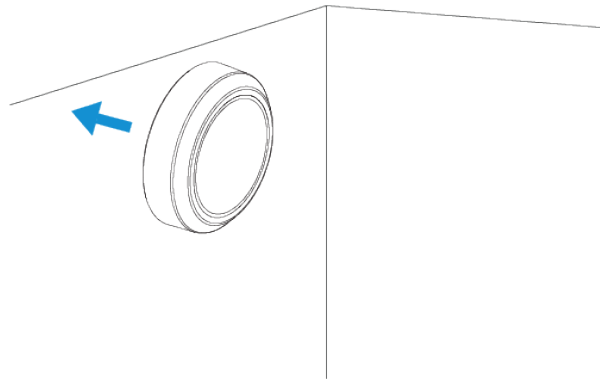
### Installation preparations and requirements:

- Ensure the installation surface is flat and stable to prevent the device from tilting or being unstable.
- Avoid prolonged direct sunlight exposure on the device.
- Ensure that the lens of the device is facing the detection area directly, and avoid any obstructions around it.
- Interference sources such as fans, curtains, and plants can affect the radar's performance. Please try to avoid having these interference sources within the detection range.
- Install the device on a dry, smooth, sturdy, grease-free wall.
- Do not install the device on rough, damp, crumbling, greasy, or wallpapered walls.
- Before installation, wipe the wall with a clean cloth to ensure it is free of dust and grease.
- After adhering the device to the wall, press firmly to ensure it is fully adhered. Allow 24 hours for the best adhesion results.

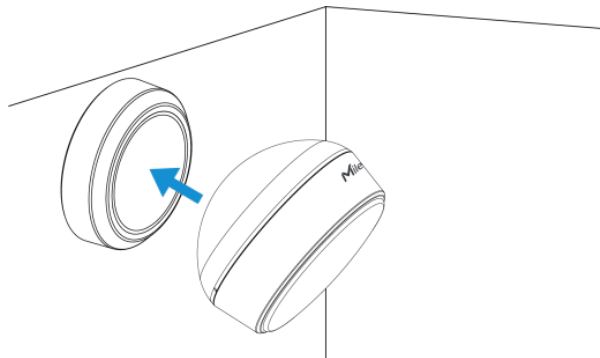
**Step 1:** Take out the bracket adhesive, peel off the protective film on one side, and affix it to the magnetic bracket.



**Step 2:** After determining the installation position, peel off the protective film on the other side of the bracket adhesive and secure the magnetic bracket to the wall.



**Step 3:** Attach the sensor unit to the magnetic bracket.

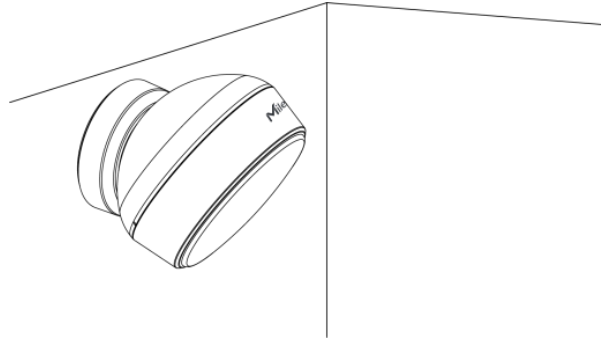


**Important:**

Ensure the sensor **logo faces upward** during installation.

**Step 4:** Installation complete.





### **Factors Affecting Accuracy**

- Interference sources such as fans, curtains, and plants within the detection range can cause false alarms.
- Continuous presence of people outside the glass surfaces can cause false alarms.
- The device has blind spots; targets within these blind spots cannot be detected.
- Because radar can penetrate objects and has a wide FOV, it is recommended to keep the conference room's door closed after use.
- Because of the radar's wide field of view (FOV), the device is unsuitable for application in small areas like bathrooms.
- This product cannot detect a relatively stationary human body that shows only respiration and heartbeat without any noticeable limb movements.

# Chapter 8. Uplink Packets and Downlink Commands

## Overview

All messages are based on following format (HEX), the Data field should follow little-endian:

Channel1	Type1	Data1	Channel2	Type2	Data2	Channel3	...
1 Byte	1 Byte	N Bytes	1 Byte	1 Byte	N Bytes	1 Byte	...

For decoder examples please find files on <https://github.com/Milesight-IoT/SensorDecoders>.

## Uplink Packets

### Basic Information

The device will report a basic information packet whenever joining the network.

Item	Channel	Type	Byte	Description
Power On	ff	0b	1	Device is on
Protocol Version	ff	01	1	Example: 01=V1
Serial Number	ff	16	8	16 digits
Hardware Version	ff	09	2	Example: 03 10 = V3.1
Firmware Version	ff	0a	2	01 14 => V1.14
Device Type	ff	0f	1	00: Class A, 01: Class B, 02: Class C, 03: Class C to B
TSL Version	ff	ff	2	0100=>1.0
Reset Report	ff	fe	1	ff, only report after reset to factory default

**Example:**

ff0f00 ffff0100 ff090100 ff0a0101 ff166443f17847780000 ff0bff ff0101 fffeff		
Channel	Type	Value
ff	0f	Device Type: 00(Class A)

ff0f00 ffff0100 ff090100 ff0a0101 ff166443f17847780000 ff0bff ff0101 ffeff		
Channel	Type	Value
ff	ff	TSL Version: 0100 (V1.0)
ff	09	Hardware Version: 0100 (V1.0)
ff	0a	Firmware Version: 0101(V1.1)
ff	16	SN: 6791d19604050005
ff	0b	Power On: ff
ff	01	Protocol Version: 01(V1)
ff	fe	Reset Report: ff

## Periodic Report

The device supports the sensor data according to reporting interval.

Item	Channel	Type	Byte	Description
Battery Level	01	75	1	UINT8, Unit: %, [1-100]
Occupancy Status	03	00	1	01-Occupied, 00-Vacant
Illumination Status	04	00	1	01-Bright, 00-Dim, fe-Disabled

## Example

Periodic packet:

017564 030001 040000		
Channel	Type	Value
01	75	Battery Level: 64 => 100%
03	00	Occupied status: 01 => Occupied
04	00	Illumination Status: 00=>Dim

## Alarm Report

The device supports to report below types of alarm report packets.

Item	Channel	Type	Byte	Description
Occupancy Status	03	00	1	01-Occupied, 00-Vacant
Illumination Status	04	00	1	01-Bright, 00-Dim, fe-Disabled

**Example**

Occupancy Status Alarm packet:

030001 040000		
Channel	Type	Value
03	00	Occupied status: 01 => Occupied
04	00	Illumination Status: 00=>Dim

## Downlink Commands

This device supports downlink commands for configuration and control. The downlink application port is 85 by default.

**General Setting**

Item	Channel	Type	Byte	Description
Reboot	ff	10	1	ff
Reporting Interval	ff	8e	3	Byte 1: 01 Byte 2-3: Interval, [1~1440], Unit: min
Occupancy Trigger Sensitivity	f9	3e	1	00: Low, 01: Middle, 02: High
Occupancy Maintaining Sensitivity	f9	3f	1	00: Low, 01: Middle, 02: High
Report Vacancy Time	f9	40	1	UINT8, Unit: min
Illuminance	f9	41	1	Byte 1: 01-enable, 00-disable Byte 2-3: Bright Status Illuminance, UINT 16, unit: lux, Default: 700

Item	Channel	Type	Byte	Description
				Byte 4-5: Dim Status Illuminance, UINT 16, unit: lux, Default: 300
Hibernate Period	f9	44	6	<p>Byte 1: 01-Period 1, 00-Period 2</p> <p>Byte 2: 01-enable; 00-disable</p> <p>Byte 3-4: Start Time, unit: min</p> <p>Byte 5-6 End Time, unit: min</p>
UTC Time Zone	ff	bd	2	INT16/60
Daylight Saving Time	ff	ba	10	<p>Byte1: 01-Enable; 00-Disable</p> <p>Byte2: DST Bias, INT8, Unit: min</p> <p>Byte3: Start Month</p> <p>Byte4:</p> <ul style="list-style-type: none"> <li>• Bit 7-4: Start Week</li> <li>• Bit 3-0: Start Day</li> </ul> <p>Byte5-6: Start Time, UINT 16, Unit: min</p> <p>Byte7: End Month</p> <p>Byte8:</p> <ul style="list-style-type: none"> <li>• Bit 7-4: End Week</li> <li>• Bit 3-0: End Day</li> </ul> <p>Byte9-10: End Time, UINT 16, Unit: min</p>
Time Synchronization	ff	4a	1	ff
Bluetooth	ff	8f	1	01: enable; 00: disable

**Examples:**

1. Reboot the device.

ff10ff
--------

2. Set report interval as 20 minutes.

ff8e011400		
Channel	Type	Value
ff	8e	14 00=>00 14= 20 minutes

3. Set up Hibernate Mode.

f944 00 01 fe01 ec04		
Channel	Type	Value
ff	44	00: Period 1  01: Enable Hibernate mode  fe 01 => 01 fe = 510 minutes = 8 hours +30mins = 8:30  ec 04 => 04 ec = 1260min- utes =21 hours = 21:00

4. Set time zone as UTC-4.

ffbd10ff		
Channel	Type	Value
ff	bd	10 ff => ff 10 = -240/60=-4

5. Set Daylight Saving Time from Mar. /2nd /Sun. 14:00 to Nov. /1st /Mon 14:00 and Bias as 60min.

ffba 01 3c 03 27 4803 0b 11 4803		
Channel	Type	Value
ff	ba	01=enable

ffba 01 3c 03 27 4803 0b 11 4803		
Channel	Type	Value
		<p>Bias: 3c=60min</p> <p>Start Month: 03=March</p> <p>27=&gt;0010 0111</p> <p>Start Week: 0010=2= 2<sup>nd</sup></p> <p>Start Day: 0111=7=Sunday</p> <p>Start Time: 48 03=&gt; 03 48=&gt;840min=14:00</p> <p>End Month: 0b=11=Nov.</p> <p>11=&gt;0001 0001</p> <p>End Week: 0001=1=1<sup>st</sup></p> <p>End Day: 0001=1=Monday</p> <p>End Time: 48 03=&gt; 03 48=&gt;840min=14:00</p>

6. Enable Illuminance collection and set bright/dim status threshold values.

f941 012003 9001		
Channel	Type	Value
f9	41	<p>01=&gt;Enable;</p> <p>Max Illuminance: 20 03=&gt;03 20=&gt;800 lux</p> <p>Min Illuminance: 90 01=&gt;01 90=&gt;400 lux</p>

### Milesight D2D Setting

Item	Channel	Type	Byte	Description
D2D Feature	ff	84	1	01-enable, 00-disable

Item	Channel	Type	Byte	Description
D2D Key	ff	35	8	The first 16 digits of D2D key, and the last 16 digits are fixed as 0.
D2D Settings	ff	96	8	<p>Byte 1:</p> <p>00-Occupied</p> <p>01-Vacant</p> <p>02-Bright</p> <p>03-Dim</p> <p>04-Occupied/Bright</p> <p>05-Occupied/Dim</p> <p>Byte 2: 01-enable, 00-disable</p> <p>Byte 3: 01-enable LoRa Uplink, 00-disable LoRa Uplink</p> <p>Byte 4-5: D2D control command</p> <p>Byte 6-7: control time, Unit: min</p> <p>Byte 8: 01-enable control time, 00-disable control time</p>

**Example:**

1. Set D2D Key as 12345678123456780000000000000000.

ff35 1234567812345678		
Channel	Type	Value
ff	35	1234567812345678

2. Set D2D settings.



ff96 04 01 01 04e0 0500 01		
Channel	Type	Value
ff	96	<p>04=&gt; Occupied/Bright;</p> <p>01=&gt;Enable;</p> <p>01=&gt;Enable LoRa Uplink;</p> <p>04 e0=&gt;e0 04, Control Command is e0 04;</p> <p>05 00=&gt;00 05, Control time is 5 mins;</p> <p>01=&gt;Enable Control Time</p>

## Chapter 9. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: [iot.support@milesight.com](mailto:iot.support@milesight.com)

Online Support Portal: <https://support.milesight-iot.com>

Resource Download Center: <https://www.milesight.com/iot/resources/download-center/>

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