Vape Detector

GS601

User Guide

Contents

Chapter 1. Preface

Copyright Statement

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 must not be disassembled or remodeled in any way.
- To ensure the security of your device, please change the device password during the initial configuration. The default password is 123456.
- The device is not intended to be used as a reference sensor, and Milesight will not hold responsibility for any damage which may result from inaccurate readings.
- Do not place the device in places where the temperature is below/above the operating range.
- Do not place the device near naked flames, heat source (such as oven), or expose it to direct sunlight, cold source, liquid, and with extreme temperature changes.
- The device must never be subjected to shocks or impacts.

Revision History

Release Date	Version	Description
Sept.30, 2024	V 1.0	Initial version

Chapter 2. Product Introduction

Overview

GS601 is a LoRaWAN® vape detector designed to identify vaping and smoking events and send alerts. Equipped with a suite of powerful embedded sensors, GS601 simultaneously measures temperature, humidity, TVOC, and PM parameters.

When environmental changes reach the preset thresholds, the detector activates both the LED light alarm and buzzer sound alarm.

In addition to local alerts, GS601 can also remotely report the air quality status and alarm messages via LoRaWAN® technology. By integrating with Milesight LoRaWAN® gateway and Milesight Development Platform, users can visually monitor all sensor data and manage the device remotely.

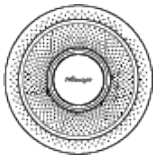
GS601 seamlessly blends into various installation environments, making it ideal in restrooms, changing rooms, classrooms, stairwells, apartments and other locations.

Features

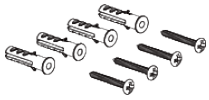
- Integrated with multiple sensors to detect vape, smoke, TVOC, temperature, humidity, and PM parameters
- Supports anti-water vapor disturbance and other gas interference, with interference information reported
- Equipped with a buzzer and indicator to signal when the device is powered, faulty, alarmed, or in an invalid status
- Supports setting the buzzer hibernate time to avoid false alarms during deployment
- Equipped with a vibration sensor to detect acts of vandalism or tampering
- Built-in NFC for easy configuration
- Compatible with standard LoRaWAN® gateways and network servers
- Compliant with Milesight Development Platform
- Support Firmware Update Over the Air (FUOTA) feature

Chapter 3. Hardware Introduction

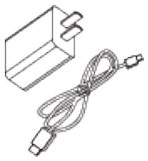
Packing List



1 × GS601 Sensor



4 × Ceiling Mounting Kits



1 × Type-C Cable (1.2m) & Power Adapter

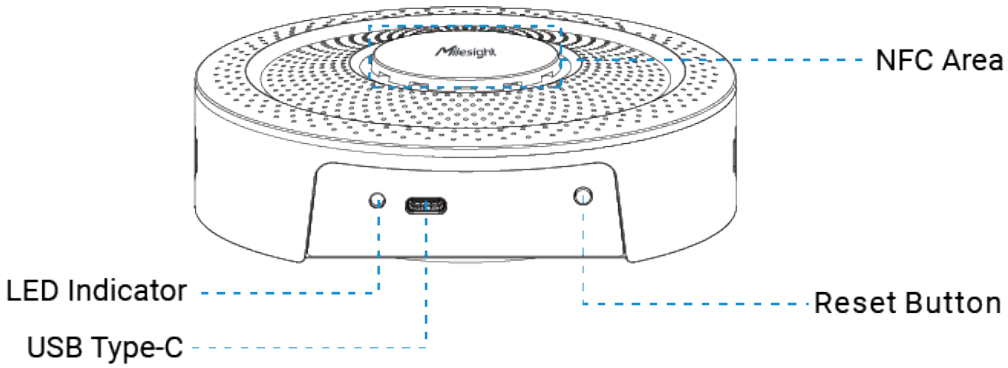
1 × PoE Splitter (Optional)

1 × Quick Guide

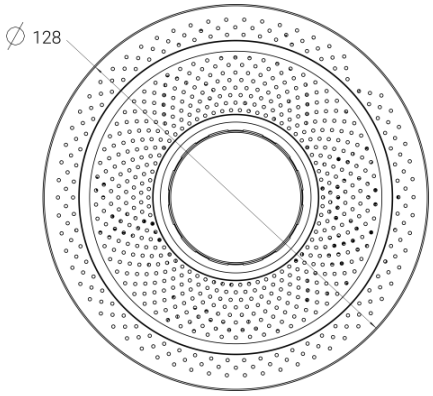
1 × Warranty Card

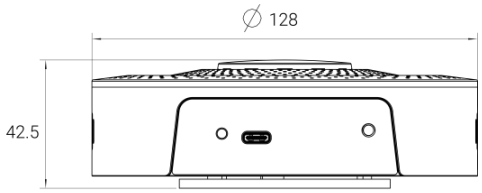
Note:
If any of the above items is missing or damaged, please contact your sales representative.

Hardware Overview



Dimensions(mm)





Button and LED Indicator

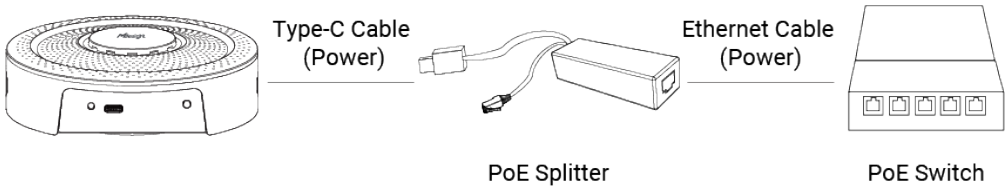
Function	Action	LED Indicator
Power ON/OFF	Connect to the power supply	Green Light Static On
	Disconnect power	Light Off
Reboot	Press and hold reset button for more than 3s	Blinks Slowly
Reset to Factory Default	Press and hold the power button for more than 10 seconds.	Blinks Quickly
Alarm	When one of the measured values exceeds the threshold	Red Light Static On
	When someone tampers the device	

Chapter 4. Power Supply

The device can be powered by USB (5V/1A). Choose one of the following methods to power up the device.

Powered by a Power Adapter

Powered by a PoE Splitter



Chapter 5. Quick Start

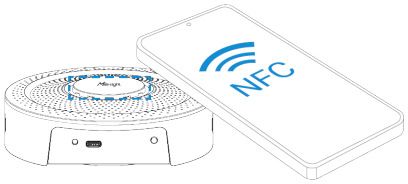
This chapter describe the steps to quickly configure this device. If you requires more advanced settings, please refer to operation guide chapter.

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.



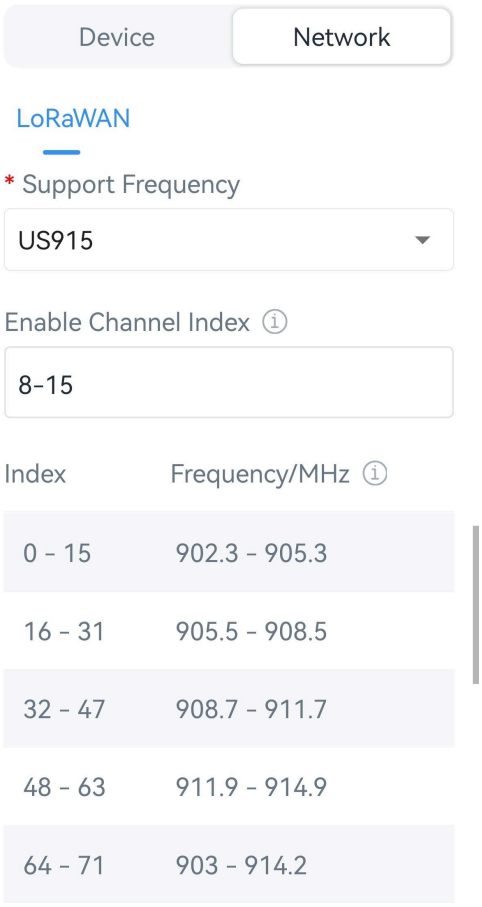
Configure the Network Setting

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 IoT Cloud or Milesight Development Platform.

2. Select supported frequency the same as LoRaWAN® gateway.

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



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

Chapter 6. Operation Guide

LoRaWAN® Settings

This chapter describes the LoRaWAN® network settings of device.

Parameter	Description
Device EUI	Unique ID of the device which can be found on the device. **Note:** please contact sales for device EUI list if you have many units.
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® Version	V1.0.2 and V1.0.3 are available.
Work Mode	It is fixed as Class C.
Confirmed Mode	If the device does not receive ACK packet from network server, it will re-send data once.
Join Type	OTAA and ABP mode are available. **Note:** 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 **Note:** • The default value of earlier devices is 5572404C696E6B4C6F52613230313823. • Please contact sales before purchase if you require random App Keys.

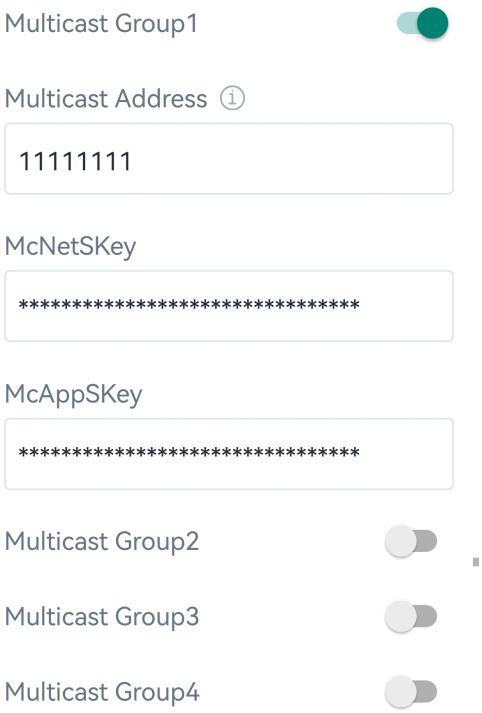
Parameter	Description
Network Session Key	Nwkskey for ABP mode, the default is 5572404C696E6B4C6F52613230313823.
Application Session Key	Appskey for ABP mode, the default is 5572404C696E6B4C6F52613230313823.
Device Address	DevAddr for ABP mode, default is the 5th to 12th digits of SN.
Rejoin Mode	Reporting interval≤35 mins: the device will send a specific number of Link-CheckReq MAC packets to the network server every reporting interval or every double reporting interval to validate connectivity; If there is no re-sponse, the device will re-join the network. Reporting interval > 35 mins: the device will send a specific number of LinkCheckReq MAC packets to the network server every reporting interval to validate connectivity; If there is no response, the device will re-join the network. **Note:** 1. Only OTAA mode supports rejoin mode. 2. The actual sending number is **Set the number of packets sent** +1.
Supported Frequency	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. **Examples:** 1, 40: Enabling Channel 1 and Channel 40 1-40: Enabling Channel 1 to Channel 40 1-40, 60: Enabling Channel 1 to Channel 40 and Channel 60 All: Enabling all channels Null: Indicate that all channels are disabled

Parameter	Description
ADR Mode	Enable or disable network server to adjust Spreading Factor, Bandwidth an 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.
RX2 Frequency	RX2 frequency to receive downlinks. Unit: Hz

Multicast Setting

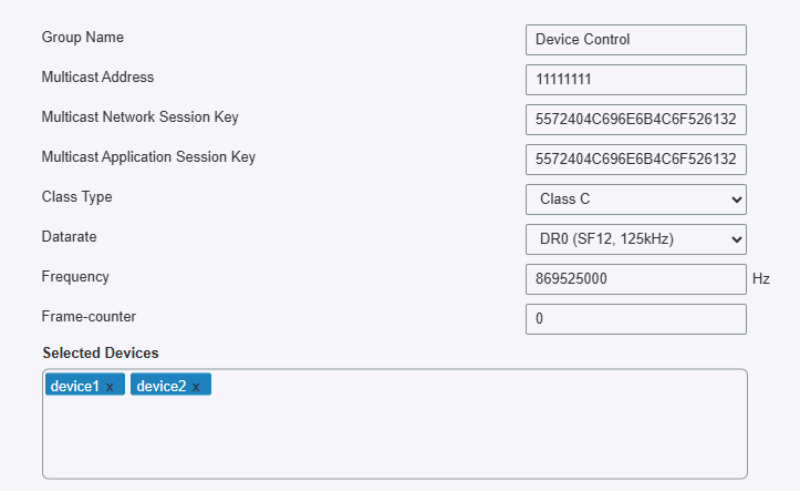
The device supports setting up several multicast groups to receive multicast commands from the network server, then users can use this feature to control devices in bulk.

1. Enable **Multicast Group**, and set unique multicast address and keys to distinguish other groups. You can also keep these settings by default.



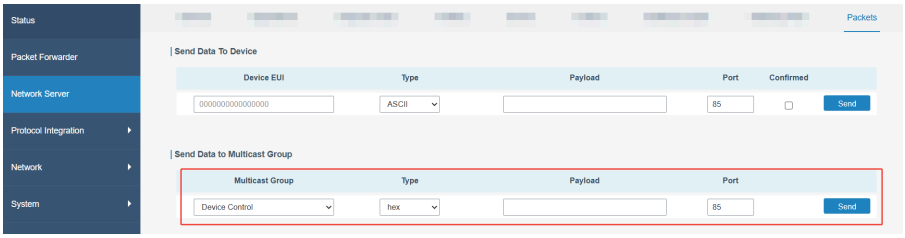
Parameter	Description
Multicast Address	Unique 8-digit address to distinguish different multicast groups.
Multicast McNetSkey	32-digit key. Default values: Multicast Group 1: 5572404C696E6B4C6F52613230313823 Multicast Group 2: 5572404C696E6B4C6F52613230313824 Multicast Group 3: 5572404C696E6B4C6F52613230313825 Multicast Group 4: 5572404C696E6B4C6F52613230313826
Multicast McAppSkey	

2. Add a multicast group on the LoRaWAN® network server. Take Milesight gateway as example, go to **Network Server > Multicast Groups** to add a multicast group and configure the group according to the device settings.



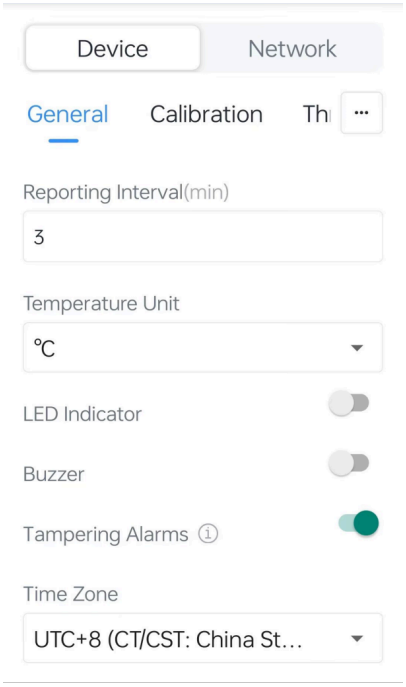
3. Go to **Network Server > Packets**, select the multicast group and fill in the downlink command, click **Send**. The network server will broadcast the command to devices that belong to this multicast group.

Note:
Ensure all devices' application ports are the same.



General Settings

General settings include the basic parameters of the device.



Parameter	Description
Reporting Interval	Reporting interval of transmitting current sensor values to network server. Default: 10 mins, Range: 1-1440 mins.
Temperature Unit	Change the temperature unit displayed on the ToolBox and screen.

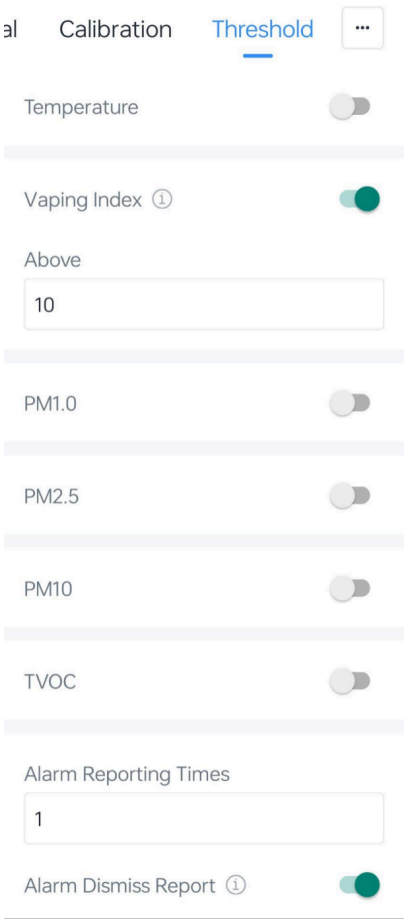
Parameter	Description
	Note: 1. The temperature unit in the reporting package is fixed as Celsius(°C). 2. Please modify the threshold settings if the unit is changed.
LED Indicator	Enable or disable the LED Indicator to display alarm status.
Buzzer	Enable or disable the buzzer to sound for three reasons: the vaping index exceeds the threshold, triggering the tamper alarm and triggering the burning alarm. **Hibernate Period:** When enabled, the buzzer will not respond when the vaping index exceeds the threshold within the set time period. **Stop Buzzer:** When enabled, press the reset button to turn off the current buzzer alarm.
Tampering Alarms	After enabled, if the device is tampered with or forcibly moved, it will trigger an alarm accompanied by a red light and a buzzer. **Mute Buzzer Time**: Within 15 minutes after the device is powered on, if the tampering alarm is triggered, the buzzer will remain silent. However, an alarm packet will still be reported, and the red indicator light will remain steadily on. This parameter can be configured using a downlink command.
Time Zone	Set the time zone of the current location. When you click **Sync** button of ToolBox App to sync time, the device will also sync the time zone from smartphone automatically.
Daylight Saving Time	Enable or disable Daylight Saving Time (DST). **Start Time:** the start time of DST time range. **End Time:** the end time of DST time range. **DST Bias:**the DST time will be faster according to this bias setting.
Change Password	Change the password for ToolBox App to write this device.

Calibration Settings

The device supports to add the calibration value to the raw collected value, and report the results.

Threshold Settings

When current value is over the threshold value, the device will report a threshold alarm packet once instantly.



Parameters	Description
Alarm Reporting Times	Set the number of alarm reports to be sent after the threshold is triggered, the default value is 1.
Alarm Dismiss Report	Once enabled, the device will send an alarm dismiss report when it detects a value below the threshold for 1 minute (vape index) or if the collected value is below the threshold for 3 continuous times (for other items except the vape index).

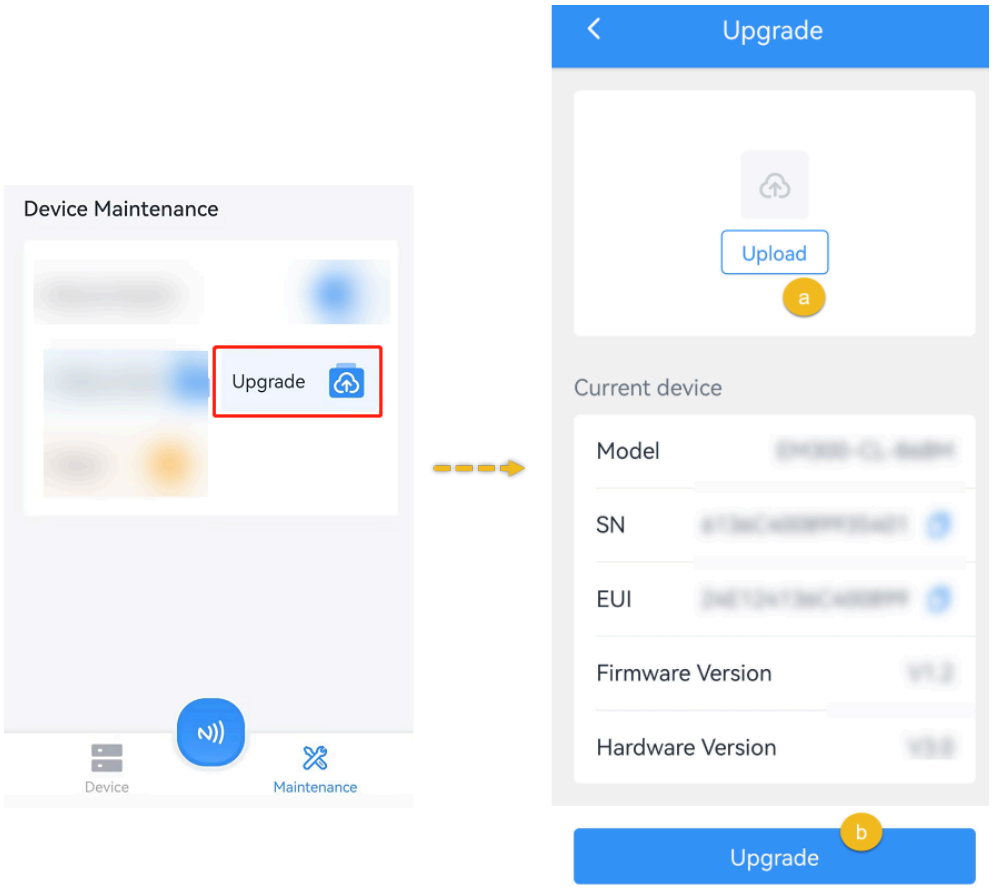
Maintenance

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.



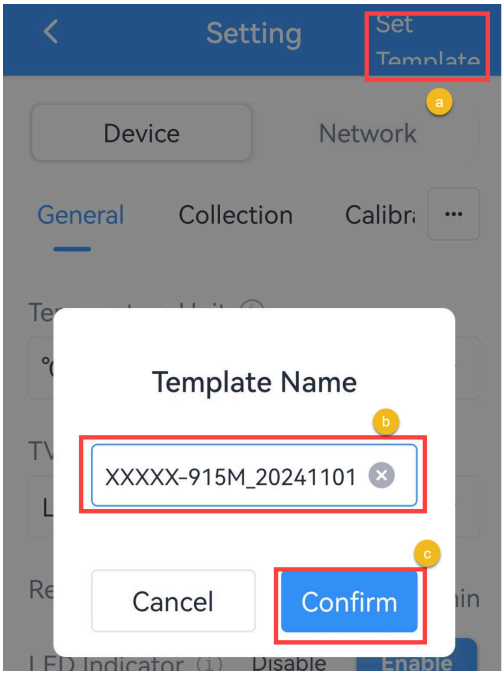
Backup and Restore

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.

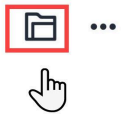
Backup and Restore

Step 1: Launch ToolBox App, attach the NFC area of smartphone to the device to read the configuration.

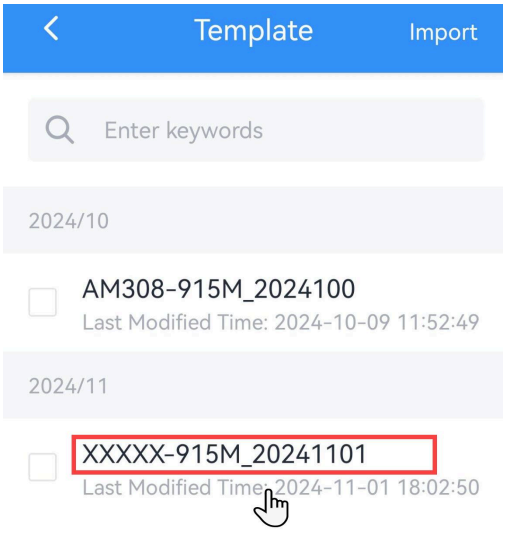
Step 2: Edit the configuration as required, click **Set Template** to save current configuration as a template to the ToolBox App.



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



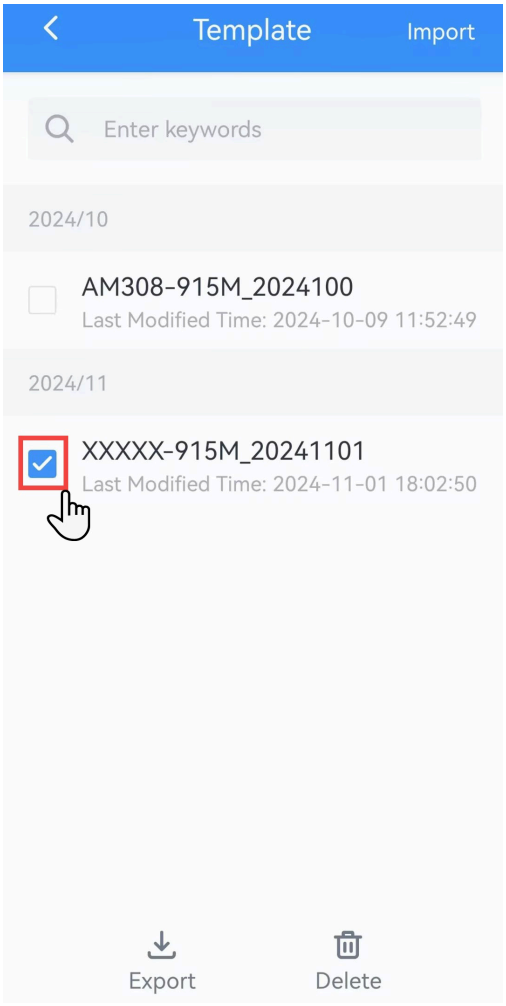
Step 4: Select and click the target template, click **Write** to import the configuration to target devices.



Export and Delete Template

Step 1: Check the box of the target template.

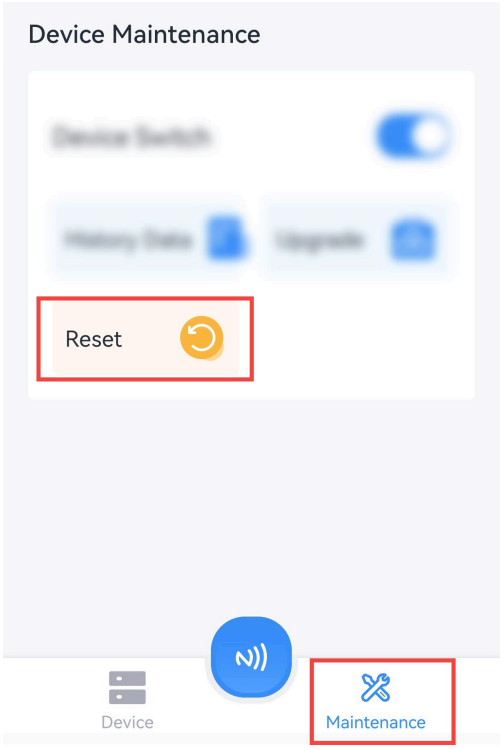
Step 2: Click **Export** to export this template as JSON format file and save it to the smartphone, click **Delete** to delete this template from your ToolBox App.



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.


Device Maintenance
Reset
Device
Maintenance

Chapter 7. Device Maintenance

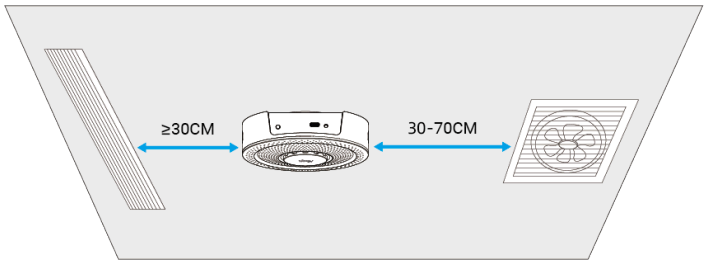
- Avoid exposing the device to gases with high concentrations over a long period time, or it may damage the device and decrease the performance.
- Do not expose the device to corrosive gas, silicon vapor or high levels of volatile organic compounds.
- Do not clean the device with detergents or solvents such as benzene or alcohol. To clean the device, wipe with a soft moistened cloth. Use another soft, dry cloth to wipe dry.
- Do not paint or cover the device, which may block the air inlets.
- It is suggested to place device under well-ventilated environment, otherwise the accuracy of TVOC will drop.
- There may be an accuracy drift in TVOC detection if the device is stored without power for a long time, and different devices may experience varying degrees of TVOC drift. If you prefer a more consistent reading with better precision, you can keep the device powered on in clear air for some time according to the below list.

Storage Time (Power Off)	Operating Time
Less than 1 month	At least 2 days
1~6 months	At least 3 days
More than 6 months	At least 7 days

Chapter 8. Installation

Installation Location

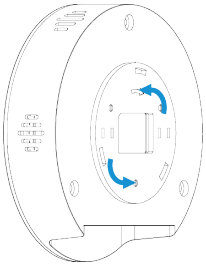
- Recommended installation height and environment: On the ceiling at a height of 2.4m to 3m in areas where smoking may occur.
- Avoid installing the device near large metal objects and in areas where it may be exposed to liquid sprays.
- The device's response speed is affected by the ambient airflow. It is recommended to install it in places where the airflow is stable, such as 30-70cm away from exhaust fans. Avoid installing it in places with unstable airflow, such as near doors/windows/air conditioning vents/places directly blown by fans. Ensure a distance of more than 30cm, and the greater the wind force, the farther the distance should be.



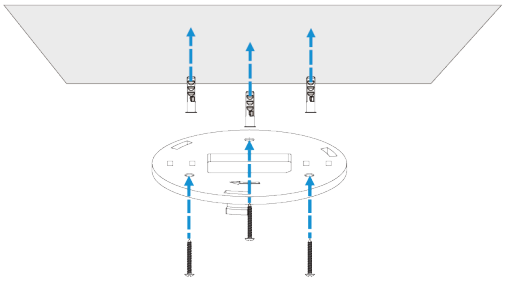
- If there are no exhaust fans or other ventilation equipment in the installation environment, it is recommended to deploy devices within a detection range of a 1.5m radius.
- In an installation environment with partitions or dividers (like toilet): If the partitions or dividers extend to the ceiling, it is recommended to install one device in each partition or divider; If not, it is recommended to deploy devices according to the detection range of a 1.5m radius.

Device Installation

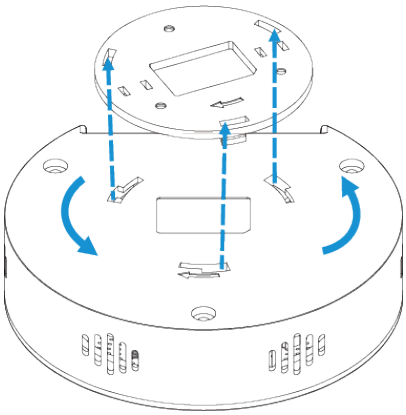
Step 1: Hold the back mounting plate, rotate counterclockwise to remove the mounting plate from the back of the device.



Step 2: Drill 3 holes in the ceiling according to the mounting plate. Insert the wall plugs into the holes, then secure the mounting plate with screws.



Step 3: Align the three holes on the device with the three protrusions on the mounting bracket, then rotate the device clockwise to secure it.



Chapter 9. Uplink and Downlink

Overview

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

Command ID	Parameter/Data	...
N Bytes	0-N Byte	...

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

When sending downlink commands while enabling Confirmed mode, the device will send replies as below format:

Table 1. Reply Format:

Command (1B)	Result & Length (1B)	Command ID (1-N Byte)	...
ef	Bit 7-4: result code, 0=success, 5=parameter error, 7=execute error, 10=association error Bit 3-0: command length	Same as downlink command	...

Uplink Data

This chapter describes the reported data of the device.

Basic Information

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

Item	Command	Byte	Description
Device Status	c8	1	00: Off, 01: On
TSL Version	df	2	Example: 01 02 = V1.2
Device Request	ee	0	Send after reset
Device Version	da	8	Hardware version (2B) + Software version (2B) + 00000000
OEM ID	d9	2	4 digits

Item	Command	Byte	Description
Device Type	cf00	1	00: Class A, 01: Class B, 02: Class C, 03: Class C to B
Serial Number	db	8	16 digits

Example:

df0100 ee db6850e23348820008 da0100010100000000 d90000 c801 cf0002	
Command	**Value**
Protocol version	TSL version: 0102 => V1.2
Reset Report	Reset
Device SN	SN: 6850e23348820008
Device Version	Hardware Version: 0100(V1.0) Software Version: 0101(V1.1)
OEM ID	OEM ID: 0000
Power On	01: Device is on
Device Type	02: Class C

Periodic Report

The device supports to report the sensor data according to reporting interval.

Item	Command	Byte	Description
Vaping Index	01	1	UINT8, Range: 0~100
PM1.0	03	2	UINT16, Unit: μg/m^3, Range: 0~1000
PM2.5	05	2	UINT16, Unit: μg/m^3, Range: 0~1000
PM10	07	2	UINT16, Unit: μg/m^3 , Range: 0~1000
Temperature	09	2	INT16*0.1, Unit: °C , Range: -20~60
Humidity	0b	2	UINT16*0.1, Unit: % , Range: 0~100
TVOC	0d	2	UINT16, Unit: μg/m^3 , Range: 0~2000
Tampering Status	0f	1	01-Triggered; 00-Normal
Buzzer	11	1	00-buzzer is not beeping

Item	Command	Byte	Description
			01-buzzer is beeping

Example:

0104 030f00 051000 071100 091c01 0b0702 0d0000 0f00 1100	
Command	**Value**
01	Vaping Index: 04 => 4
03	PM1.0: 0f 00 => 000f =>15 μg/m^3
05	PM2.5: 1000 => 0010=16μg/m^3
07	PM10: 1100 => 0011=17μg/m^3
09	Temperature: 1c01 => 011c=284*0.1=28.4°C
0b	Humidity: 0702 => 0207 =>519*0.1 =51.9%
0d	TVOC: 0000 => 0μg/m^3
0f	Tampering Status: 00 => Normal
11	Buzzer: 00 => No beep

Alarm Report

Item	Command	Byte	Description
Vaping Index Alarm	02	1/2	**Byte1:** 00-Collecting failed; 01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; 20-Water Vapor Interference Alarm Dismiss; 21-Water Vapor Interference Alarm **Byte2:** UINT8, Range: 0~100
PM1.0 Alarm	04	1/3	**Byte1**: 00-Collecting failed;

Item	Command	Byte	Description
			01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; **Byte2-3**: UINT16, Unit: μg/m^3, Range: 0~1000
PM2.5 Alarm	06	1/3	**Byte1**: 00-Collecting failed; 01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; **Byte2-3**: UINT16, Unit: μg/m^3 , Range: 0~1000
PM10 Alarm	08	1/3	**Byte1**: 00-Collecting failed; 01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; **Byte2-3**: UINT16, Unit: μg/m^3 , Range: 0~1000
Tempera- ture Alarm	0a	1/3	**Byte1**: 00-Collecting failed; 01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; 20-Burning Alarm Dismiss; 21-Burning Alarm (Temperature > 70°C or change of temperature > 15 °C within 15s) **Byte2-3**: INT16*0.1, Unit: °C , Range: -20~60
Humidity Alarm	0c	1	00-Collecting failed; 01-Under-range; 02-Over-range

Item	Command	Byte	Description
TVOC Alarm	0e	1/3	**Byte1**: 00-Collecting failed; 01-Under-range; 02-Over-range; 10-Threshold Alarm Dismiss; 11-Threshold Alarm; **Byte2-3**: UINT16, Unit: μg/m^3 , Range: 0~2000
Tampering Alarm	10	1	21-Alarm; 20-Alarm Dismiss
Buzzer	11	1	00-buzzer is not beeping 01-buzzer is beeping

Example:

1. Temperature Alarm: the environment detection item exceeds threshold.

0a112001 1100	
Command	**Value**
0a	11=>Threshold Alarm 2001 => 0120=288*0.1=28.8°C
11	00 => No beep

2. Tampering Alarm.

1021 1101	
Command	**Value**
10	21=>Alarm
11	01 =>Beep

Downlink Command

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

General Setting

Item	Command	Byte	Description
Reporting Interval	60	3	**Byte1**:Unit 00-Second; 01-Minute **Byte2-3**: Interval, UINT16, Range: 10~64800s or 1~1440min
Temperature Unit	61	1	00-°C; 01-°F
LED Indicator	62	1	01-Enable; 00-Disable
Buzzer	63	1	01-Enable; 00-Disable
Buzzer Hibernate Period	64	6	**Byte1**: 01-Period 1; 02-Period 2 **Byte2**: 01-Enable; 00-Disable **Byte3-4**: Start Time, UINT16, Unit: min, Range: 0~1440Byte5-6: End Time, UINT16, Unit: min, Range: 0~1440
Stop Buzzer	67	1	01-Enable; 00-Disable
Mute Buzzer Time	66	2	UINT16, Unit: min, Range: 1~1440 This downlink is only set for the tamper alarm.
Tampering Alarm	67	1	01-Enable; 00-Disable
UTC Time Zone	c7	2	INT16 / 60
Daylight Saving Time	c6	10	**Byte1**: 01-Enable; 00-Disable **Byte2**: DST Bias, INT8, Unit:min **Byte3**: Start Month **Byte4**: Bit 7-4: Start Week Bit 3-0: Start Day

Item	Command	Byte	Description
			Byte5-6: Start Time, UINT 16, Unit:min **Byte7**: End Month **Byte8**: Bit 7-4:End Week Bit 3-0: End Day **Byte9-10**: End Time, UINT 16, Unit:min

Example:

1. Set reporting interval as 20 minutes.

60 01 1400	
Command	**Value**
60	01=Minute 14 00 => 00 14 = 20 minutes

2. Set time zone to UTC-4.

c7 10ff	
Command	**Value**
c7	10 ff => ff10 = -240/60 = -4

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

c6 01 3c 03 27 4803 0b 11 4803	
Command	**Value**
c6	01=enable Bias: 3c=60min Start Month: 03=March 27=>0010 0111 Start Week: 0010=2= 2nd Start Day: 0111=7=Sunday

c6 01 3c 03 27 4803 0b 11 4803	
Command	**Value**
	Start Time: 48 03=> 03 48=>840min=14:00 End Month: 0b=11=Nov. 11=>0001 0001 End Week: 0001=1=1st End Day: 0001=1=Monday End Time: 48 03=> 03 48=>840min=14:00

4. Mute the Buzzer for 10 minute.

66 0a00	
Command	**Value**
66	0a 00 => 00 0a = 10 min

Calibration Setting

Item	Command	Byte	Description
Temperature Calibration	71	3	**Byte1**: 01-Enable; 00-Disable **Byte2-3**: INT16*0.1, Unit: °C, Range: -80~80
Humidity Calibration	72	3	**Byte1**: 01-Enable; 00-Disable **Byte2-3**: INT16*0.1, Unit: %, Range: -100~100
Vaping Index Calibration	77	2	**Byte1**: 01-Enable; 00-Disable **Byte2**: INT8, Range: -100~100
PM1.0 Calibration	73	3	**Byte1**: 01-Enable; 00-Disable **Byte2-3**: INT16, Unit: μg/m^3, Range: -1000~1000
PM2.5 Calibration	74	3	**Byte1**:

Item	Command	Byte	Description
			01-Enable; 00-Disable **Byte2-3**: INT16, Unit: μg/m^3, Range: -1000~1000
PM10 Calibration	75	3	**Byte1**: 01-Enable; 00-Disable **Byte2-3**: INT16, Unit: μg/m^3, Range: -1000~1000
TVOC Calibration	76	3	**Byte1**: 01-Enable; 00-Disable **Byte2-3**: INT16, Unit: μg/m^3,Range: -2000~2000

Threshold Setting

Item	Command	Byte	Description
Temperature Threshold	69	6	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3-4: Min. Value, INT16*0.1, Unit: °C Byte5-6: Max. Value, INT16*0.1, Unit: °C
Vaping Index Threshold	6e	4	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3: Min. Value, UINT8 Byte4: Max. Value, UINT8
PM1.0 Threshold	6a	6	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3-4: Min. Value, INT16*0.1, Unit: μg/m^3

Item	Command	Byte	Description
			Byte5-6: Max. Value, INT16*0.1, Unit: μg/m^3
PM2.5 Threshold	6b	6	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3-4: Min. Value, INT16*0.1, Unit: μg/m^3 Byte5-6: Max. Value, INT16*0.1, Unit: μg/m^3
PM10 Threshold	6c	6	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3-4: Min. Value, INT16*0.1, Unit: μg/m^3 Byte5-6: Max. Value, INT16*0.1, Unit: μg/m^3
TVOC Threshold	6d	6	Byte1: 01-Enable; 00-Disable Byte2: 00-disable; 01-below; 02-over; 03-within; 04-below or over Byte3-4: Min. Value, INT16, Unit: μg/m^3 Byte5-6: Max. Value, INT16, Unit: μg/m^3
Alarm Reporting Times	6f	2	UINT16, Range: 1~1000
Alarm Dismiss Report	70	1	01-Enable; 00-Disable

Example:

Set Vaping Index threshold as above 2.

6e 01 020002	
Command	**Value**
6e	01=>Enable

6e 01 020002	
Command	**Value**
	02=>over 00=>Min. Value 02=>Max. Value

Control Command

Item	Command
Reboot	be
Query Periodic Report	b9
Stop Buzzer Alarm	5f
Rejoin the Network	0b

Chapter 10. Appendix

TVOC Levels and Guidelines

IAQ Rating	TVOC (µg/m^3)	Air Quality
≤1.99	<300	Very Good
2.00 to 2.99	300 to 1000	Good
3.00 to 3.99	1000 to 3000	Medium (not recommend- ed for exposure > 12 months)
4.00 to 4.99	3000 to 10000	Poor (not recommend- ed for exposure > 1 month)
≥5.00	>10000	Bad (not recommended)

Chapter 11. 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

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

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

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