



IAQ Kit



iBox IAQ Kit Datasheet

Unboxing Your Next Level IoT Adventure

KIT AND TECHNOLOGY OVERVIEW

Why IAQ Kit

Congratulations on beginning the journey of Indoor Air Quality (IAQ) monitoring towards a greener future.

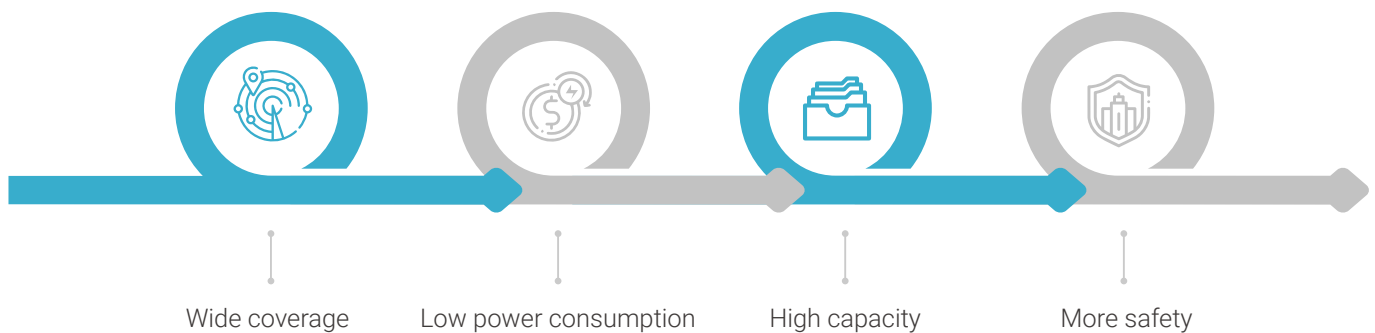
The Milesight iBox Smart IAQ Kit helps to optimize energy efficiency and sustain good conditions. Real-time and remote energy management is actionable by monitoring indoor air quality, such as temperature, humidity, CO₂, PM2.5 & PM10, TVOC and more from our IAQ sensors.

" Together with IoT solutions, it's easy to optimize energy efficiency and healthy. " The Milesight Team



Why LoRaWAN®

LoRaWAN® is a long range, wide area, and low-power networking protocol.



Why Milesight D2D



Milesight D2D is a device to device communications protocol which enables LoRaWAN® based devices to communicate directly with one another when they are in the same group.

*** Independently Developed by Milesight**

- Low latency (less than 1 second in the same room)
- Low power for battery operation of both sides
- Long range and as secure as LoRaWAN®
- No useless beaconing and difficult synchronization
- Initial feature which coexists with LoRaWAN®
- No additional hardware and LoRaWAN® gateways are needed

2-in-1 IAQ Sensor

AM102L is a compact sensor for detecting temperature and humidity. The optional e-ink screen offers more possibilities for various scenarios.



Overall Features

- Traffic Light Status Indicator for Direct Notification
- Wireless Installation with Anti-theft Protection
- Support Data Storage and Retransmission
- Smart Screen Mode & Hibernation Mode for Ultra-Low Power Consumption
- 9 Years (AM102L)



AM102L

| Model | | AM102L |
|--------------------------|--------------------|---|
| Wireless Transmission | Technology | LoRaWAN® |
| | Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| | Mode | OTAA/ABP Class A |
| Measurement | Temperature | ± 0.2°C (-20°C ~ 60°C) |
| | Humidity | ± 2% RH (0% RH~ 100% RH) |
| Physical Characteristics | Power Supply | 2 × 2700 mAh ER14505 Li-SOCI2 Replaceable Batteries |
| | Battery Life* | Over 9 Years |
| | Ingress Protection | IP30 |
| | Dimension | 68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in) |
| | Installation | Wall Screw Mounting, 3M Tape Mounting |

* Tested under laboratory conditions and for guideline purposes only.

3-in-1 IAQ Sensor

AM103 is a compact IAQ sensor for detecting CO₂ concentration, humidity and temperature accurately and economically.



Overall Features

- Traffic Light Status Indicator for Direct Notification
- Wireless Installation with Anti-theft Protection
- Support Data Storage and Retransmission
- Smart Screen Mode & Hibernation Mode for Ultra-Low Power Consumption
- 2.13 -Inch E-Ink Screen with Vivid Emoticon Indication
- Light/Dark Color Theme
- Battery Life up to 3 Years



AM103

| Model | | AM103 |
|--------------------------|-----------------------------------|---|
| Wireless Transmission | Technology | LoRaWAN® |
| | Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| | Mode | OTAA/ABP Class A |
| Measurement | Temperature | ± 0.2°C (-20°C ~ 60°C) |
| | Humidity | ± 2% RH (0% ~ 100%) |
| | Carbon Dioxide (CO ₂) | ± (30 ppm + 3% of Reading), 400 to 5000 ppm |
| Physical Characteristics | Configuration | NFC |
| | Display | 2.13-inch Black & White E-Ink Screen |
| | Alarm System | 1 × Traffic Light Status Indicator |
| | Power Supply* | Easily Replaceable Batteries with up to 3-Year Battery Life |
| | Ingress Protection | IP30 |
| | Dimension | 68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in) |
| | Installation | Wall Screw Mounting, 3M Tape Mounting |

* Tested under laboratory conditions and for guideline purposes only.

9-in-1 IAQ Sensor

AM307/AM319 is a comprehensive IAQ sensor for detecting CO2 concentration, temperature, humidity, light, HCHO/O3 level, TVOC, barometric pressure, PM2.5, PM10 and motion.



Overall Features

- Traffic Light Status Indicator and Built-In Buzzer for Alarming
- Flexible Installation with Anti-theft Protection
- Powered via USB Type-C for Stable Power Supply
- Battery Life up to 3 Years (AM307)
- 4.2 -Inch E-ink Screen with Vivid Emoticon Indication
- Smart Screen Mode for Low Power Consumption



AM307
AM319

| | Model | AM307 | AM319 |
|--------------------------|----------------------|---|--|
| Wireless Transmission | Technology | LoRaWAN® | |
| | Frequency | CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4 | |
| | Work Mode | OTAA/ABP Class A | OTAA/ABP Class C |
| Measurement | Temperature | ± 0.2°C (-20°C - 60°C) | |
| | Humidity | ±2%RH (0% ~ 100%RH) | |
| | Motion | Vacant/Occupied (Status) | |
| | Light | 0-60000 Lux (Determine as 6 Levels, 0-5) | |
| | TVOC (IAQ Rating) | 1.00 - 5.00, ±1 Accuracy | |
| | Barometric Pressure | ±0.5 hPa (260 ~ 1260 hPa) | |
| | Carbon Dioxide (CO2) | ± (30 ppm + 3% of Reading), 400 ~ 5000 ppm | ± (50 ppm + 5% of Reading), 400 ~ 2000 ppm |
| | PM2.5 & PM10 | - | ±10µg/m3 (0-100 µg/m³), ±10% (100 ~ 1000µg/m³) |
| | Formaldehyd(HCHO)* | - | ±10% (0 - 1.25 mg/m³) |
| Physical Characteristics | Ozone (O3)* | - | ±5% FS (0 - 10 ppm) |
| | Configuration | NFC, USB Type-C Port | |
| | Power Supply** | Around 3 Years | 5V/1A by Type-C Port |
| | Ingress Protection | IP30 | |
| | Dimensions | 100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in) & 4.2-inch E-Ink Screen | |
| | Installation | 3M Tape Mounting, Wall Screw Mounting, 86 Box Mounting | |

* HCHO or O3 sensor is alternative option and both support replacement.

** Tested under laboratory conditions and for guideline purposes only.

Industrial LoRaWAN® Gateway

UG56 is a high-performance 8-channel LoRaWAN® gateway that offers reliable connectivity for industrial applications.



Overall Features

- Industrial-Grade Design with Compact Size
- Stay Connected via Ethernet, Cellular, and Wi-Fi
- Gateway Fleet for Comprehensive Networking
- Listen Before Talk (LBT) for Downlink Data Integrity
- Semtech SX1302 Chip with High-Performance Quad-Core CPU
- Embedded Network Server Compatible with TTN, ChirpStack, Everynet, Senet, etc.
- BACnet/IP Support for Seamless Integration into Existing Building Management Systems (BMS)



UG56

| Model | | UG56 |
|--------------------------|--------------------|---|
| LoRaWAN® | Chipset | SX1302, 8 Channels (Half-duplex) |
| | Antenna | 1 × 50 Ω SMA Connector (Center PIN: SMA Female) |
| | Frequency | CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4 |
| | Protocol | V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C |
| Connectivity | Ethernet | 1 × RJ45 PoE PD Port, 10/100 Base-T (IEEE 802.3) |
| | Wi-Fi | IEEE 802.11b/g/n, 2.4 GHz |
| | Cellular (Opt.) | 1 × Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands |
| Hardware | CPU | Quad-core 1.3 GHz, 64-bit ARM Cortex-A35 |
| | Power Supply | ① 1 × 802.3af Standard PoE Input ② 5V, 2A by Type-C Port |
| Physical Characteristics | Ingress Protection | IP30 |
| | Dimension | 110 × 75 × 24 mm (4.33 × 2.95 × 0.94 in) |
| | Installation | Desktop, Wall Mounting |

Milesight IoT Cloud

Milesight IoT Cloud provides unparalleled levels of vertical integration with Milesight LoRaWAN® devices.



Built on AWS to Provide Confidential and Reliable Infrastructure



Licensing with Ease: Just Copy & Paste and Upgrade Is Done



Get the **Free Trial** now and begin your data-driven future.

Transform Real-Time and Historical Data into Drag-and-Drop Widgets on Dashboard



Control Access and Monitor Projects from Anywhere

Email and Mobile Push Notifications based on Triggered Events



Milesight Development Platform

Milesight Development Platform is an integration platform that simplifies integration and device deployment and management. With the technical complexity managed, you can fully focus on developing your IoT project.

- Easy integration & data exchange
- Centralized management of devices, applications, and projects
- Not requiring extensive software/hardware knowledge



[Try the Platform Now!](#)

If you need any assistance or clarification, please send an email to evie@milesight.com.



Plan and Pricing

| Free Plan - For light users | Professional Plan - For regular business users | Private Cloud |
|---|---|--|
| <ul style="list-style-type: none">• 10 connected devices• 3 applications for integration | <ul style="list-style-type: none">• Connected devices: \$1/device/year• Unlimited applications for integration | <ul style="list-style-type: none">• Contact us |

*Camera product users are charged upon the number of image transmissions.

For pricing details, visit [Milesight Development Platform](#)



You Can Always Trust Us

Milesight is a multi-dimensional sensing products company transforming how the world is perceived and connected, and delivering safety, efficiency, and business insights.

Our mission is to digitalize the world with connected sensors, deliver the most accurate and valuable data, and extract actionable insights with our partners.

Our vision is to continuously drive the society and environment towards a more connected, efficient, and sustainable future.



- AM319 · AM307
- AM103 · AM102L
- UG56
- Milesight IoT Cloud

*Enjoy free cloud services for a specified period of time

Indoor Air Quality Solution

iBox IAQ Kit



- VS121 · VS340
- DS3604 · UG56
- Milesight IoT Cloud

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Smart Office Solution

iBox CoWork Kit-A



- VS121 · WS101
- WS301 · WS156
- UC100 · UG56
- Milesight IoT Cloud

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Smart Office Solution

iBox CoWork Kit-B



- WS101 · WS201
- GS301 · VS330
- UC100 · UG56
- Milesight IoT Cloud

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Smart Restroom Solution

iBox Smart Restroom Kit



- WS101 · WS301
- AM103 · WS303
- WS558 · UC300
- UG56
- Milesight IoT Cloud

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Smart Building Solution

iBox Smart Building Kit



- EM500-SMTC
- UC511
- UG56
- Milesight IoT Cloud

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Smart Agriculture Solution

iBox Smart Agriculture Kit



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www.milesight.com

iot.sales@milesight.com

86-592-5085280