



# Indoor Air Quality (IAQ) Solution with LoRaWAN®

Change **Is Calling**

 Better Inside, More in Sight

## IAQ Is the Key Metric for Satisfying People' s Wellness and Building Management Demand.

43%

### Did you know that we spent 90 percent of time indoors?

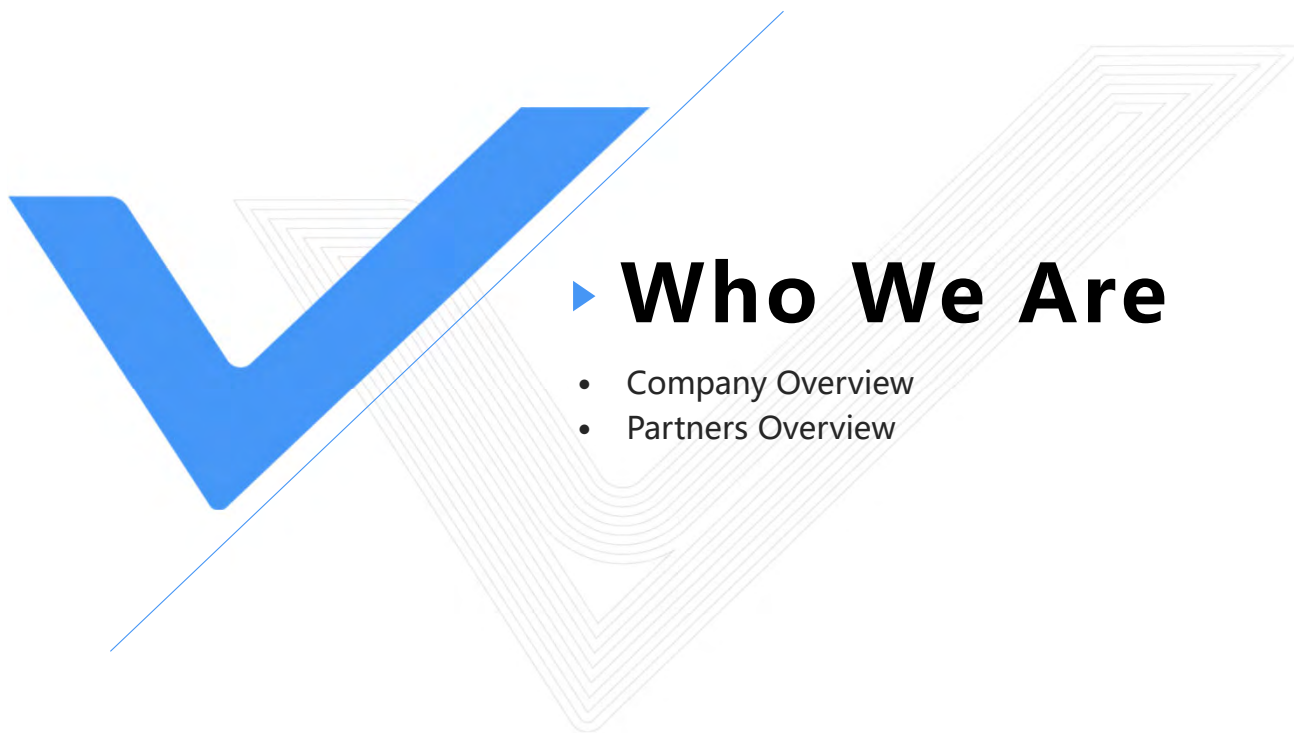
Surprisingly studies have shown that the air in our schools and offices can be even 5 times more polluted than outside.

### Did you know that heating and cooling buildings uses a lot of energy?

According to USEPA, it could be up to 43 percent of all energy use in the United States. The main purposes of a Heating, Ventilation and Air-Conditioning (HVAC) system are to help maintain good indoor air quality (IAQ) through adequate ventilation with filtration and provide thermal comfort. HVAC systems are among the largest energy consumers in schools.

90%





## ▶ Who We Are

- Company Overview
- Partners Overview

# ABOUT MILESIGHT IOT

Milesight is a fast-growing high-tech company delivering smart IoT and video surveillance products with a focus on IoT technologies, including Artificial Intelligence, 5G and LoRaWAN®, since 2011. With improved sensing capability and advanced IoT insights, we help customers worldwide optimize their business operation in a more efficient and sustainable way. In collaboration with a global network of distributors and system integrators, we are committed to building open ecosystems and accelerating IoT strategies to the next level.



**AIoT**

Solution  
Provider



**600+**

Employees



**2000+**

Distributors and  
System Integrator Partners



**120+**

Serves to 120+  
Countries and Regions



**50%+**

Compound Annual  
Growth Rate



**2**

2 Product Lines: Video  
Surveillance and IoT



# SENSING INSIGHT MAKE PHYSICAL WORLD BETTER



## Sense

Ingest the original environment from the sensing devices, whether they are network cameras or environmental sensors.



## Understand

Through IoT technologies, convert the original resource into visualized, automated, and value-added data that is critical to the physical world.



## Interact

Massive critical information about the environment gathered becomes insights. The outcome, such as decision-making and future planning, tells us how to create a more efficient and intelligent world.

# MILESIGHT MILESTONE

• **2011**

## Establishment

- Milesight headquarters was founded
- Started from video surveillance industry

## Quality & Innovation

- Kept diversifying the product portfolio & functions
- Evolved into unique Milesight brand recognition

• **2012-2014**

• **2015-2016**

## Quality & Innovation

- Increased brand awareness and expanded overseas market scope
- Continuous innovation in advanced technology and expertise

## Fast Growing

- Built Milesight IoT brand for IoT industry
- Introduced LoRaWAN® technology
- Introduced 4G Cellular Router

• **2017-2018**

• **2019**

## High-Performing & Value-Added

- Joined LoRa Alliance to dive into IoT ecosystem
- Established Milesight Chengdu R&D center

• **2020**

## Grand Merger

- Milesight Technology and Milesight IoT became one strong entity
- Introduced 5G technology and AI deep learning

• **2021**

## Brand Upgrade

- Inauguration of the new headquarters & 10th Anniversary
- Empowered with AIoT

• **2022-2023**

## IoT Era

- Introduced Milesight new brand identity
- Further explored frontiers of IoT and sensing landing



## ▶ **What We Offer**

- IAQ Solution Featuring LoRaWAN®
- LoRaWAN® to BACnet

# Right IAQ Solutions featuring LoRaWAN®



## Advantages

- Flexible Deployment Options
- Energy Efficiency
- Coverage in Rural & Non-Cellular Areas
- Deep Penetration
- Secure
- Geolocation
- Low Cost & Future Proof



## Applications



Hospital



Supermarket



School



Office

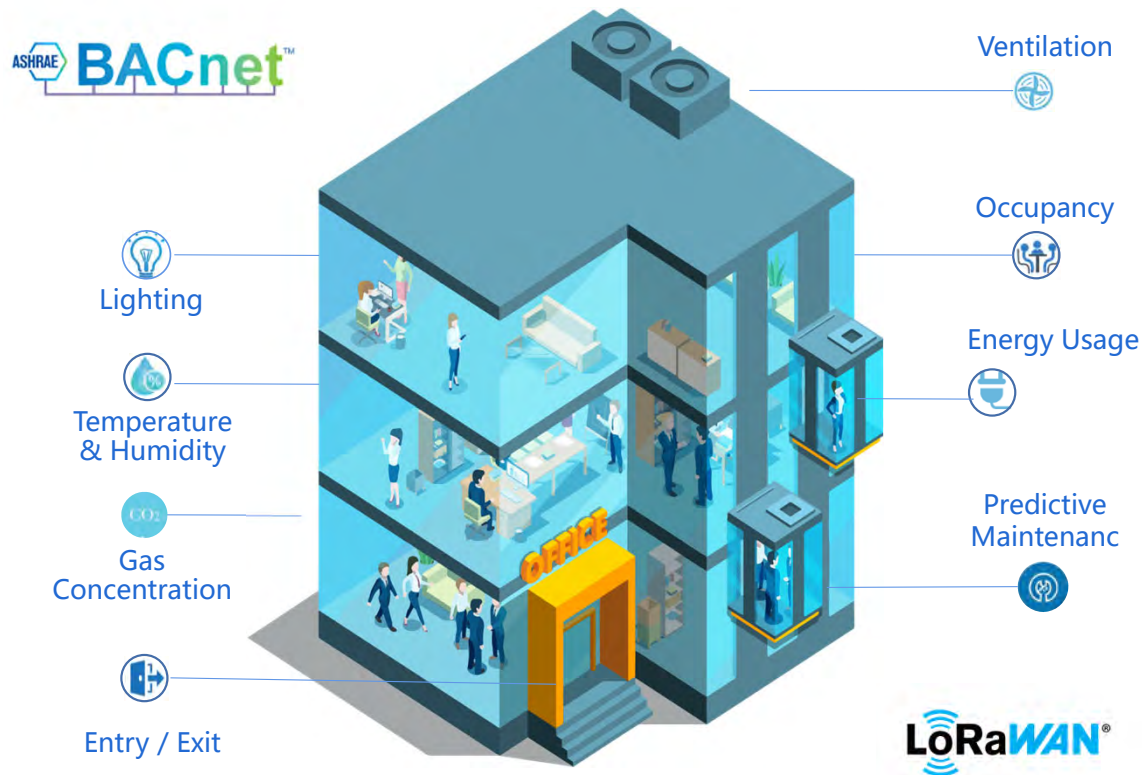


Restaurant



Church

# Transforming into Cost-effective Solution at Ease



## LoRaWAN® to BACnet

- LoRaWAN® serves as the data channel to the control applications;
- No changes to the BACnet protocol, network, or BACnet-enabled devices and management systems are needed;
- LoRaWAN® network is independent of the core BACnet infrastructure;



## ▶ IAQ Products

- LoRaWAN® IAQ Sensors
- LoRaWAN® Gateways
- Milesight IoT Cloud
- Milesight iBox IAQ Kit

# AM103/AM103L 3-in-1 IAQ Sensor

Milesight

- E-ink Screen is Optional
- Powered with 2 × 2700 mAh ER14505 Li-SOCl<sub>2</sub> Replaceable Batteries

## ◆ Seeing CO<sub>2</sub> Directly

- 🌡️ Temperature
- 💧 Humidity
- ☁️ CO<sub>2</sub>

## Mutil Sensors in One



## Key Features

- Light / Dark Color Theme
- Hibernation Mode to Save Energy
- 🌈 Vivid Emoticon Indication
- 🚦 Traffic Light Status Indicator
- 3 Year Battery Life (AM103)
- 4 Years' Battery Life (AM103L)



NFC



Battery



Button



Class A/C



# AM107 7-in-1 IAQ Sensor

- Powered with 2 × 1.5V AA Alkaline Batteries
- Support Power Supply via USB Type-C

## ◆ Sensing the Air

- |             |                       |
|-------------|-----------------------|
| Temperature | <b>CO<sub>2</sub></b> |
| Humidity    | <b>TVOC</b>           |
| Light       | Barometric Pressure   |
| PIR Motion  |                       |



## Key Features

- 2.13" E-Ink Screen
- Multiple Display Styles
- 2 x AA Batteries / USB Type-C
- Smart Screen Mode to Save Energy
- 1 Year Battery Life (AM107)
- 1.5 Years' Battery Life (AM104)

## Mutil Sensors in One



NFC



Battery



Button



Class A/C



# AM307/AM308/AM319 9-in-1 IAQ Sensor

Milesight

- Powered with 4 × 2700 mAh ER14505 Li-SOCl<sub>2</sub> Replaceable Batteries
- Support Power Supply via USB Type-C (AM319)

## ◆ Bringing All the Comforts

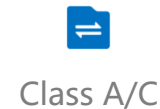
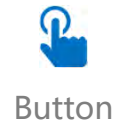
- Temperature
- Humidity
- Light
- PIR Motion
- CO<sub>2</sub>
- TVOC
- Barometric Pressure
- PM2.5 & PM10
- HCHO or O<sub>3</sub>

## Mutil Sensors in One



## Key Features

- 4.2" E-ink Screen
- Traffic Light Status Indicator
- Vivid Emoticon Indication
- Light / Dark Color Theme
- Built-in Buzzer for Alarming
- 1 Year Battery Life (AM308)
- 3 Year Battery Life (AM307)



# IAQ Sensor At A Glance

## AM103/AM103L

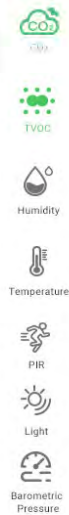
- Light/Dark Display Mode
- Itsy-bitsy & Eye-Catching
- 2.13 Inch E-ink Screen (AM103)
- Vivid Emoticon Indication (AM103)
- Traffic Light Status Indicator
- Anti-theft Protection
- Battery Powered up to 3 Years' Service Life (AM103) / 4 Years' Service Life (AM103L)



3 in 1 IAQ Sensor

## AM104/AM107

- Compact Sized & Delightfully Affordable
- 2.13 Inch E-ink Screen
- Visual and Intuitive Display
- Powered via USB Type-C (AM104 & AM107)
- Battery Powered around 1 Year Service Life (AM107) / 1.5 Years' Service Life (AM104)



7 in 1 IAQ Sensor

## AM307/AM319

- Palm Sized & All-round Capabilities
- 4.2 Inch E-ink Screen
- Light/Dark Display Mode
- Vivid Emoticon Indication
- Traffic Light Status Indicator & Buzzer
- Anti-theft Protection
- Powered via USB Type-C (AM307 & AM319)
- Battery Powered up to 3 Years' Service Life (AM307)



9 in 1 IAQ Sensor

# UH63 Mini LoRaWAN® Gateway

Milesight

Free

FREE Built-in Network Server!

8 Channels (2000 nodes)  
GPS / GLONASS



-20°C to +60°C  
Operating Temp



Blind Spot Coverage  
Massive Connectivity



Desktop, Wall or Ceiling  
Mounting



Eye-Catching Design  
As Small As A Disk



Support Noise Analyzer, Gateway  
Fleet, Listen Before Talk



# UG65 Indoor LoRaWAN® Gateway

Milesight

Free

FREE Built-in Network Server!

8 Channels (2000 nodes)  
GPS / GLONASS



-40°C to +70°C  
Operating Temp



ETH (PoE) /  
Wi-Fi (2.4G)/  
Cellular (1 SIM) Available.



Wall / Pole-mounting/  
DIN-Rail



IP65 Rating  
for Indoor Environment



Support Node-Red, Noise Analyzer,  
Gateway Fleet, Listen Before Talk



# Milesight IoT Cloud



## Build up a PoC within A Day



## Centralized Management in One



# Milesight iBox IAQ Kit



- Support various types of partners to cover different scenarios easily;
- Mix and match of Milesight sensors, gateway and cloud platform to come up with solutions quickly;



**1 Starters Enjoy it:**  
Put **PoC** into action with reduced time & cost.

**2 New Projects Need it:**  
Meet demands of potential & sizzling markets.

**3 Deployers Love it:**  
Easy to deploy and integrate with multiple NS platforms.



## ▶ Success Stories

- 47,000 IAQ Sensors Protection in Canadian Public Schools
- IAQ Projects in British Schools, Reported by BBC News
- Smart Healthcare Project for Aged Care Facilities in Australia
- 4,400 Sensors to Optimize IAQ and Energy Efficiency in Commercial Buildings in Canada



## 47,000 IAQ Sensors Create Safer Classrooms in Canada

### Location

Public schools in Quebec, Canada

### Why Milesight

“ The hard work of our IT development and integration teams, as well as the equipment provided by Milesight, helped us fulfill the objectives of the project with the Ministry of Education of Quebec (Canada). ”

-Racem Guetat  
Communications and Business Development Manager  
from Assek Technologie



# 47,000 IAQ Sensors Create Safer Classrooms in Canada



## Sizzling Attentions

Reported by **LoRa Alliance** at [LoRaWAN® Solution that Scale.](#)

Reported by **FacilityManagement** at [Case Studies.](#)

**LoRa Alliance**

MASSIVE IOT DEPLOYMENTS THAT IMPACT PEOPLE, PLANET & PROFIT:

## LoRaWAN® Solutions that Scale

LoRaWAN is the leading LPWAN for creating IoT solutions on a massive scale. In the past 5 years we have seen the deployment of LoRaWAN devices, networks, and gateways across the globe and in numerous industries. The following case studies showcase LoRa Alliance member companies' LoRaWAN scaled solutions.

Scale is defined differently in each case study depending upon the company's place in the LoRaWAN value chain; it could be 10,000 sensors, 1600 square miles, or 50 gateway towers. LoRaWAN has been implemented at scale in cities, across countries, for smart irrigation and smart metering, to monitor air quality in thousands of schools, and to track data across multi-site businesses.



## 47,000 IAQ Sensors Create a Healthier Learning Environment in Canadian Schools

The COVID-19 pandemic demonstrated the importance of continuously monitoring indoor air quality, especially in schools. The success of two pilot programs that used LoRaWAN technology enabled the Ministère de l'Éducation du Québec to elect to deploy and install air quality and comfort parameters sensors in more than 47,000 classrooms across the province.

[Read More](#)

**FacilityManagement.com**

CASE STUDIES « Back

### Smart Indoor Air Quality Monitoring

Prior to the COVID-19 pandemic, no school's air quality data was available in Quebec. The province planned to implement a technology solution that could deliver the best possible learning and working environment to students and school staff. Milesight and Assek Technologie worked to create a province-wide IAQ solution leveraging Semtech's devices.





## IAQ Projects in British Schools, Reported by BBC News

**Milesight**

### Location

Isle of Man Schools, UK  
Tynwald buildings in Douglas, UK

### Why Milesight

"The monitors have had a big impact on how we perceive and manage our learning environments and they have also created independence in the children when managing their own classrooms."

-Steve Chapple  
Deputy Head at SPLM

Reported by [BBC News](#)



# Smart Healthcare Project for Aged Care Facilities in Australia

## Location

New South Wales,  
Queensland, Victoria,  
and Canberra in Australia;

## Why Milesight

“From our deployment experience, Milesight provides technical, marketing and product support in an almost real-time fashion. This solution is fantastic, and provides a lot of possibilities to aged care facilities to leverage the IoT technologies.” “

-Max Cheng

System Engineer and AWS Solutions Architect Professional



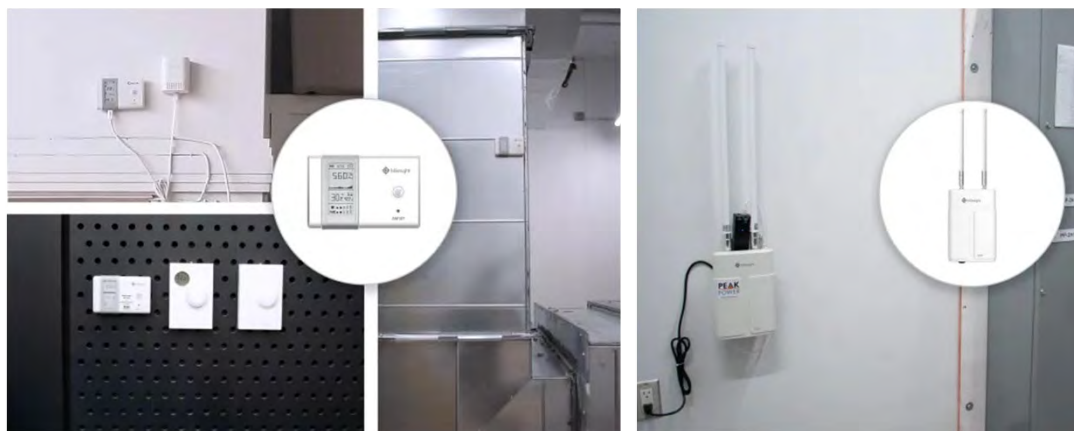
# 4,400 Sensors to Optimize IAQ and Energy Efficiency in Commercial Buildings

## Location

Canada  
Commercial buildings /estates

## Highlights

- **Wider Area Coverage:** Just 5 units of gateways are enough to support a high building with 19 floors;
- **Lower Power Consumption:** Battery health dropped 3% only within one year, no maintenance cost rose;





# Make Impact Efforlessly with IAQ Solution Now

Lighting Your Way to Green Air



 Better Inside, More in Sight

[www.milesight-iot.com](http://www.milesight-iot.com)

# Milesight - Next-generation AloT Solution Provider

## AloT Solution Provider



Join us and let' s grow  
for success together!

