

# Milesight Improves Energy Efficiency on Buildings in Valencia, the European Green Capital 2024

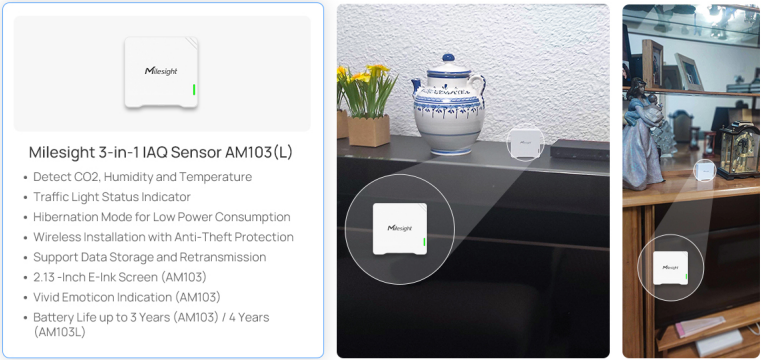
XIAMEN, FUJIAN, CHINA, June 6, 2024 /EINPresswire.com/ -- With rising energy costs, changing usage patterns, and growing concerns about greenhouse gas emissions, many organizations are under pressure to meet net-zero emissions targets while accommodating continued growth with improved operating costs. While smart buildings have been a reality for many years, advances in networking, artificial intelligence, IoT, cloud computing and cybersecurity technologies, as well as innovations in the building sector, are driving dramatic change.

## [Case Study 1](#)

Location: Valencia, Spain

Applications:

- Indoor Air Quality Monitoring
- Improved Occupant Health and Productivity

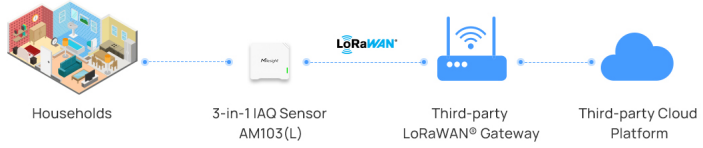


**Milesight 3-in-1 IAQ Sensor AM103(L)**

- Detect CO2, Humidity and Temperature
- Traffic Light Status Indicator
- Hibernation Mode for Low Power Consumption
- Wireless Installation with Anti-Theft Protection
- Support Data Storage and Retransmission
- 2.13 -Inch E-Ink Screen (AM103)
- Vivid Emoticon Indication (AM103)
- Battery Life up to 3 Years (AM103) / 4 Years (AM103L)

milesight-spain-case-1

**Solution**



Households → 3-in-1 IAQ Sensor AM103(L) → LoRaWAN → Third-party LoRaWAN Gateway → Third-party Cloud Platform

milesight-spain-case-2

Number of Devices Deployed: [Milesight AM103L Indoor Air Quality Sensor](#) x 130

The Wellbased project, initiated in Valencia in September 2022, focuses on tackling energy poverty and improving the health and wellbeing of vulnerable households. The project is set within the urban and residential environments of Valencia, leveraging the city's status as the European Green Capital for 2024. It utilizes advanced IoT technologies to monitor and manage indoor environmental conditions, aiming to empower citizens and facilitate a sustainable energy transition. The project encompassed 6 cities around Europe which were: Valencia (Spain), Heerlen (The Netherlands), Leeds (UK), Edirne (Turkey), Budapest (Hungary) and Jelgava (Latvia).

In Valencia, Damal Redes, Milesight's partner and a contractor for Fundació València Clima i Energia (VCI), has successfully deploy IoT solutions across a variety of homes, improving energy efficiency and make cities smarter and better.

### Challenges

- Data Accuracy and Reliability
- Ensuring the IoT sensors provide accurate and reliable data in varied residential environments.

### User Engagement

Encouraging active participation from residents in utilizing the technology for energy management.

### Integration with Existing Infrastructure

This is the most serious problem. Seamlessly integrating IoT solutions into existing residential structures without invasive installations or disruptions to daily life.

### Solutions

Damal Redes deployed 130 AM103L 3-in-1 IAQ sensors across multiple households to monitor key environmental parameters such as CO2 levels, temperature, and humidity. The network topology designed for this project ensures that data from these sensors is relayed in real-time to a central system where it can be analyzed to provide actionable insights to both residents and energy advisors.

Milesight IoT sensors collect environmental data which is then transmitted via a secure network to a centralized data ingestion partner, aggregating data for 5 other partner cities for a total of 6 cities. This system analyzes the data to provide insights on energy usage patterns, potential savings, and areas needing attention for health improvements.

### Benefits

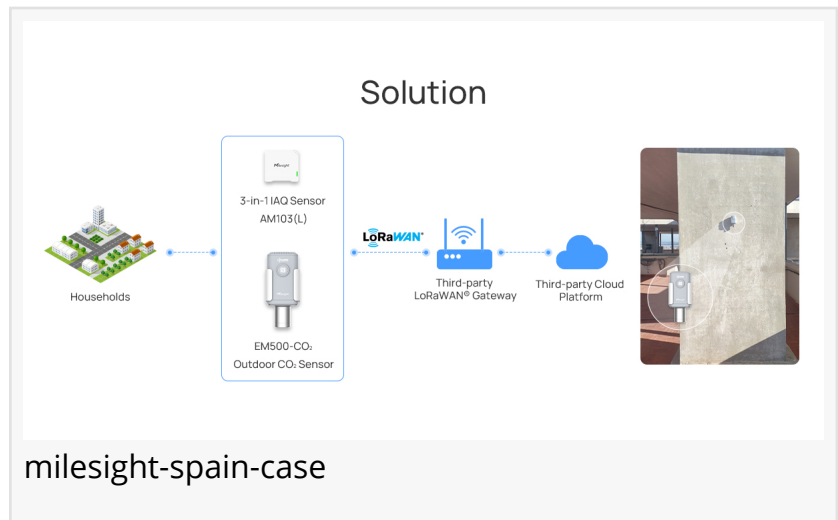
#### Energy Cost Reduction

By monitoring and managing energy usage, residents can significantly reduce their energy bills.

#### Health Improvements

Improved indoor conditions lead to better health outcomes, reducing healthcare visits and associated costs.

#### Educational Impact



The Citizen School on Right to Energy educates and empowers residents, enhancing community engagement and knowledge on sustainable practices.

## Case Study 2

Location: Valencia, Spain

### Applications

- Indoor Air Quality Monitoring,
- Improved Occupant Health and Productivity

Number of Devices Deployed: Milesight AM103L Indoor Air Quality Sensor x 48 + Milesight EM500-CO2 Carbon Dioxide Sensor x 4

Rapid urbanization brings increased challenges such as overcrowding, environmental pollution and related health problems. However, evolving technologies have created new, rich sources of data for energy consumption, environmental sensing and new management tools. This data is now being used to manage rapid urbanization and create smarter cities, helping cities make data-driven decisions. Damal Redes, Milesight's partner and a contractor for Fundació València Clima i Energia (VCI), has successfully deployed IoT solutions in Valencia, creating practical IoT solutions with promising results.

The Ebento project, launched in September 2023 in Valencia, is an innovative initiative aimed at enhancing the energy efficiency of buildings. The project focuses on pilot testing new thermal insulation techniques in two twin residential buildings to validate their performance. VCI spearheads this project with a goal to involve a broad spectrum of stakeholders, including public institutions and utilities, to foster a collaborative approach towards sustainable urban development. This project is developed in collaboration with three other cities, including Athens (Greece), Tallin (Estonia) and Manchester (UK)

### Challenges

#### Implementation of New Technologies

Integrating cutting-edge thermal insulation solutions into existing building structures.

#### Stakeholder Coordination

Ensuring effective collaboration among diverse project stakeholders.

#### Performance Validation

The most serious problem encountered is demonstrating and ensuring that the new insulation methods meet expected energy efficiency standards and are suitable for broader application.

### Solutions

The Ebento project employs advanced IoT solutions from Milesight to monitor and analyze the performance of newly implemented insulation technologies. 48 AM103L 3-in-1 IAQ Sensor and 4

EM500-CO2 Outdoor CO2 Sensor are strategically placed to collect data on thermal efficiency, which is crucial for assessing the effectiveness of the insulation under various environmental conditions.

Milesight sensors monitor various parameters such as temperature differences inside vs. outside and humidity levels. This data is crucial for assessing the thermal properties of the insulation. The sensors are connected to a central system that aggregates the data, allowing for real-time performance analysis and immediate feedback on insulation efficacy.

#### Benefits

##### Enhanced Building Efficiency

The project aims to reduce energy consumption for heating and cooling, leading to lower utility bills for residents.

##### Improved Comfort

Better insulation contributes to more stable indoor temperatures, enhancing comfort for building occupants.

##### Educational Impact

By reducing energy use, the project contributes to lower carbon emissions, aligning with broader environmental goals.

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