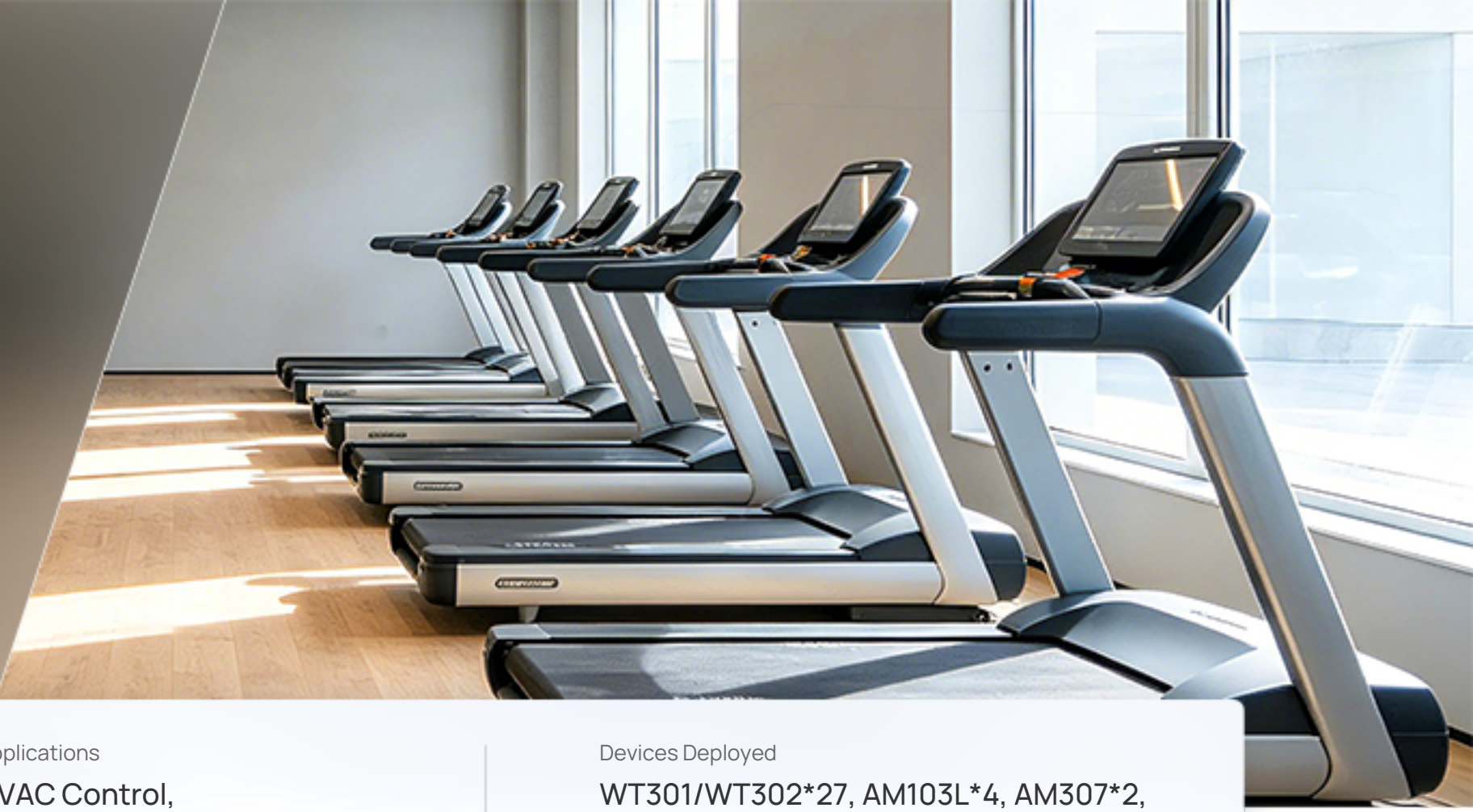


# Smarter HVAC and Indoor Air Quality Automation for Multi-Site Fitness Facilities

Reducing Energy Costs While Enhancing Member Comfort



Milesight Partner <b>E-Control</b>	Location <b>Paraguay</b>	Applications <b>HVAC Control, Indoor Air Quality Monitoring</b>	Devices Deployed <b>WT301/WT302*27, AM103L*4, AM307*2, UG56*2, UG63*1, UC300*6</b>
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## Background

SmartFit is a popular fitness chain in Latin America with multiple locations in Paraguay, where Milesight, together with its partner E-Control, implemented an initial deployment of the solution across selected gym locations. The gyms operate a variety of HVAC and ventilation systems to maintain a comfortable and healthy indoor sports environment for members, including fan-coil units, air injection and extraction systems, and air quality monitoring devices. During peak hours, maintaining stable temperature, fresh air supply, and energy efficiency across sites becomes increasingly challenging.

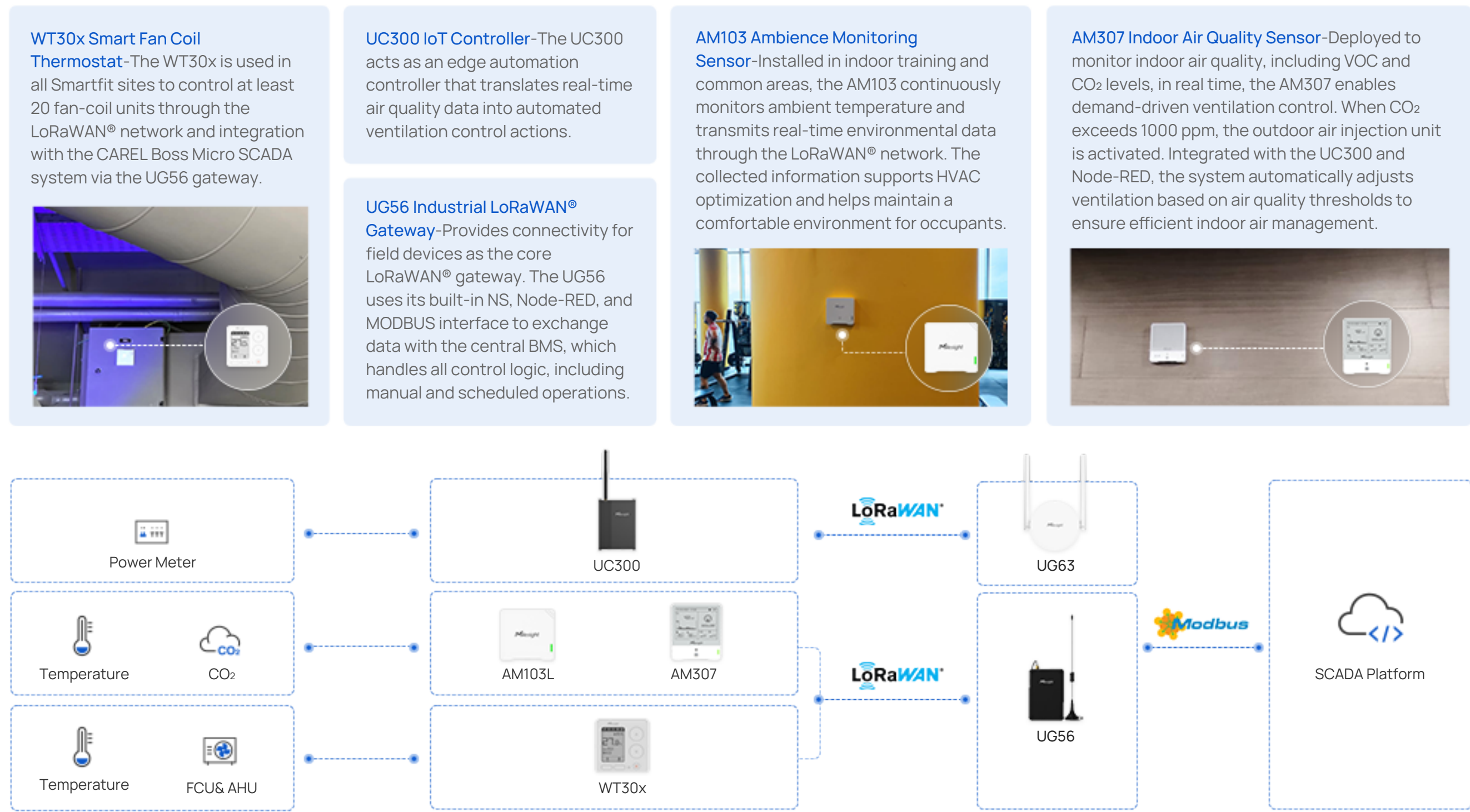


## Challenges

<p><b>High Installation Complexity Due to Extensive Cabling</b></p> <p>Traditional thermostat control required complex wiring within existing building structures, leading to higher installation costs, longer deployment time, and limited scalability for future expansion.</p>	<p><b>Lack of Centralized Control Across Multiple Locations</b></p> <p>With multiple sites in operation, facility managers had to manually adjust thermostats on-site. This not only increased workload but also made it difficult to maintain consistent indoor comfort across all locations.</p>	<p><b>No Automated Scheduling for Temperature Control</b></p> <p>Temperature control systems lacked predefined scheduling capabilities, resulting in inefficient energy usage and inconsistent indoor conditions.</p>	<p><b>Ventilation Systems Lacking Real-Time Air Quality Response</b></p> <p>Ventilation and exhaust systems were not connected to real-time air quality and VOC data, limiting automatic airflow control and causing potential air quality issues during peak hours and unnecessary energy use during low occupancy.</p>
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## Solution

Milesight, together with E-Control, deployed a LoRaWAN®-based system to enable intelligent HVAC control and indoor environmental monitoring across Smartfit locations.



## Results

<p><b>Centralized HVAC Control without Wiring Complexity</b></p> <p>All HVAC units are centrally managed through a single platform without the need for additional wiring, simplifying installation while improving system scalability across multiple locations.</p>	<p><b>Significant Reduction in Energy Consumption</b></p> <p>Ventilation and cooling systems automatically adjust based on real-time air quality data and predefined schedules, reducing unnecessary energy consumption and improving overall efficiency.</p>
<p><b>Reduced Manual Workload with Remote Management</b></p> <p>Facility managers can monitor and control HVAC systems remotely via SCADA, significantly reducing on-site adjustments and improving operational efficiency.</p>	<p><b>Consistent Indoor Comfort and Improved Member Experience</b></p> <p>Stable temperature and air quality are maintained across all gym locations, ensuring a more comfortable and healthier environment, especially during peak hours.</p>

## Discover More about Milesight Products

<p><b>UG56</b> Industrial LoRaWAN® Gateway</p>	<p><b>WT30x</b> Smart Fan Coil Thermostat</p>	<p><b>AM300L</b> Series Indoor Air Quality Sensor</p>	<p><b>UC300</b> IoT Controller</p>
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## Why Choose Milesight



“ We have chosen Milesight primarily for its wireless deployment, flexible integration capabilities (MODBUS integrator), and built-in automation features. In addition, its reliable product quality and refined design aesthetics further enhance both system performance and user experience, while significantly reducing installation complexity and improving scalability. ”

## Partner

	<p><b>About E-Control</b></p> <p>At E-Control, we offer monitoring and automation solutions for commercial buildings, industries, and residences. We specialize in controlling HVAC systems, lighting, water pumps, elevators, curtain movement, solenoid valves, and security systems, all under a unified software platform.</p> <p>We provide customized in-house development tailored to each project, combining cutting-edge technology with technical expertise. Our service is efficient, sustainable, and adaptable to meet the specific needs of our clients.</p> <p>We partner with top-tier brands to supply high-quality controllers, sensors, and other products, strategically integrating electronic and mechanical systems. This results in more efficient, reliable, and precise operations with a focus on intelligent, secure, and sustainable resource management.</p>
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