

Put the “Smart” in Milesight Headquarters:

Unveiling Milesight's Smart Green Building: Save \$45,000 per Year



As a leading Internet of Things technology company, Milesight has left an indelible mark on numerous businesses by empowering them with its cutting-edge products and solutions. Through its innovative approach and dedication to excellence, Milesight has contributed to a multitude of successful projects and inspiring success stories worldwide. It is within the heart of Xiamen, China, where Milesight's true commitment to the advancement of smart green buildings and smart offices comes to life in its remarkable headquarters.

A Glimpse into Milesight Headquarters

At the heart of our remarkable smart building green practice lies the state-of-the-art Milesight Headquarters, a beacon of innovation and collaboration in the realm of smart buildings. This extraordinary structure not only symbolizes our commitment to excellence but also showcases our dedication to harnessing the power of technology for a smarter and more sustainable future.



Inside the Smart Green Building of Milesight

Milesight Headquarters leverages the latest LoRaWAN®, AI, ToF and 5G technologies to optimize energy efficiency and water efficiency, as well as to enhance occupant comfort, improve space utilization and reduce costs. From the moment you step inside, you are greeted by a responsive environment that adapts to your needs and preferences.



Energy efficiency and sustainable development have always been our goals to design the smart Milesight building. Moreover, for our staff, the company is where they spend the most time outside of their homes during the week. We aspire furnish employees with an intelligent, comfortable workspace, elevating job contentment.

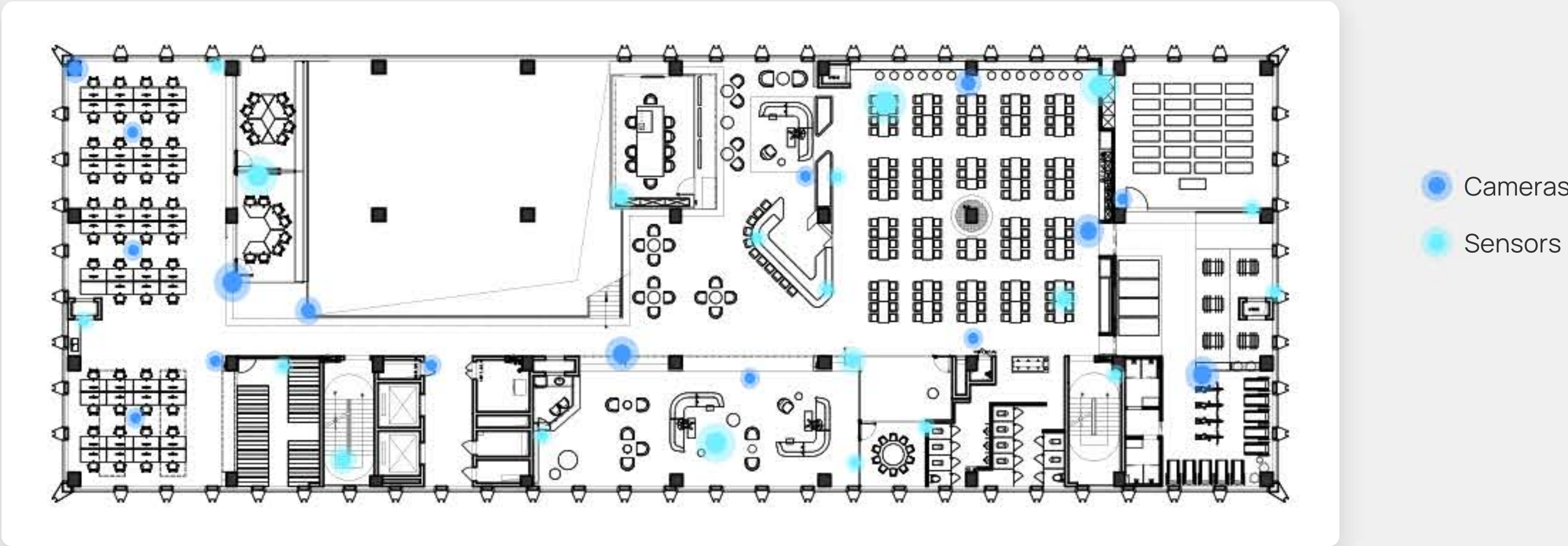
--- Sway Hong, Director of R&D Department

Topology Overview



Deployment Map

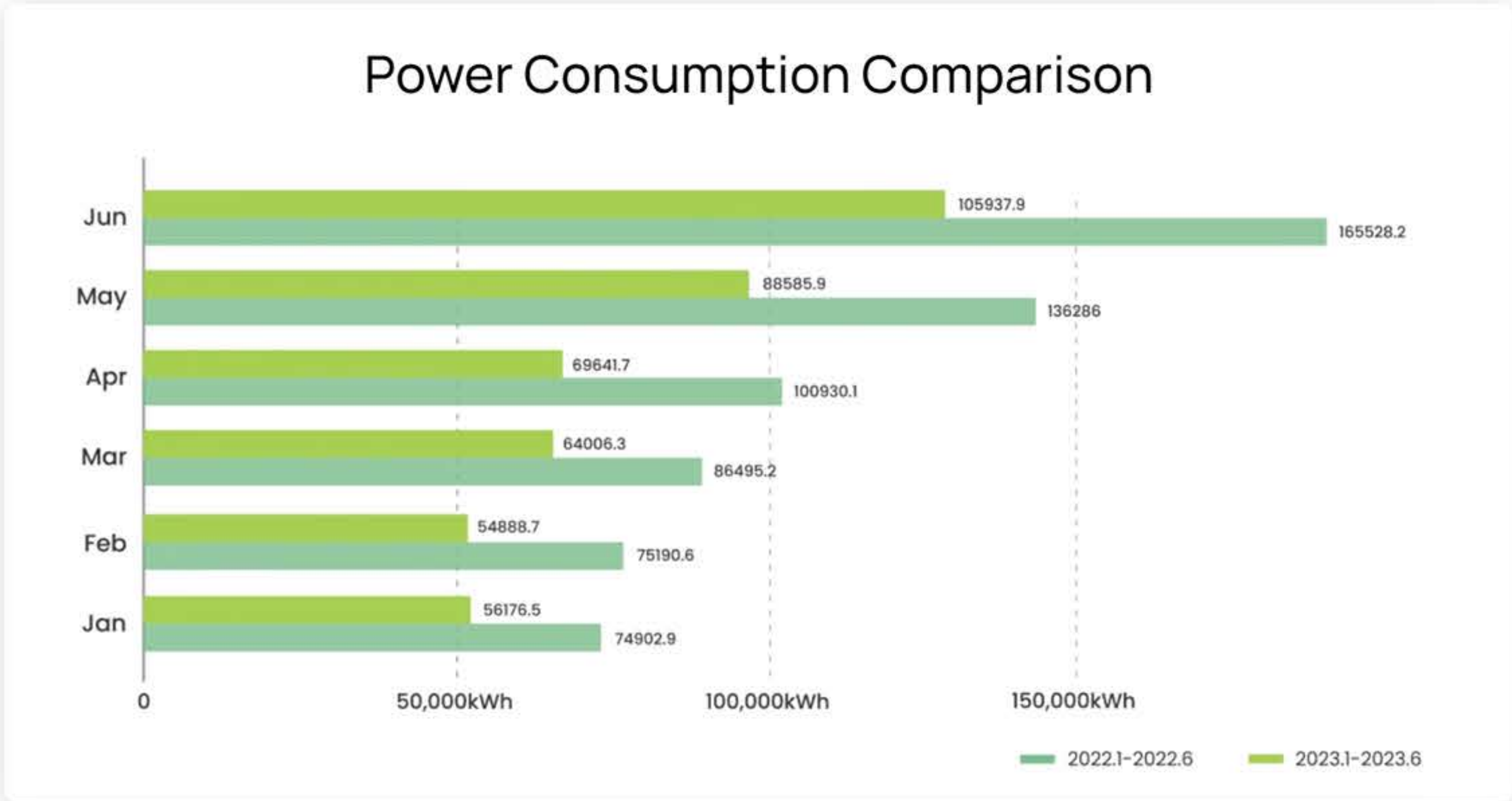
In the Milesight Green Building, there are a total of **352** Milesight sensors and **126** AI Network Cameras in deployment. These sensors play a crucial role in making the building smarter, enhancing energy efficiency and employee satisfaction. Additionally, the 126 Milesight AI Network Cameras strategically placed throughout the building serve to detect unauthorized access and suspicious loitering, effectively safeguarding lives and property.



Results on Quantifiable Benefits: Save Approximately \$45,000 per Year



Energize Energy Efficiency and Sustainability



*Power Consumption Comparison After Deploying Smart Building Solution

HVAC Control

156 Milesight Indoor Air Quality Sensors are deployed in the office building to monitor the IAQ conditions for a healthier working environment. IAQ sensors can enhance HVAC system efficiency by providing accurate and real-time data on indoor environmental conditions. By utilizing this data, HVAC system can adjust its operations to optimize energy usage while maintaining a comfortable and healthy indoor environment.

Besides, 78 Milesight VS121 Space Occupancy Sensors are installed in each of the meeting rooms, tea rooms, and multimedia rooms. These sensors, integrated with the Milesight UC100/UC300 LoRaWAN® Controller, optimize air conditioning by reducing energy usage in unoccupied rooms. This results in energy saving, cost reduction, and enhanced building sustainability.



Lighting Control and Management

Milesight's WS202 PIR Sensor communicates directly with the WS558 Smart Light Controller via Milesight D2D Protocol featuring LoRaWAN®. When people are detected, WS558 activates stairway lights within 1 second, reducing unnecessary energy usage. The system ensures lights are on only when needed, saving energy and promoting an eco-friendly environment.

Through the Milesight IoT Cloud app or web platform, managers can control lighting and create customized timing schedules anytime and anywhere. This curbs electricity costs, even if lights are left on unintentionally.



Automatic Power On/Off for Machinery and Equipment

To ensure a comfortable working environment at Milesight, in-house gym and cafe area are set in the building. Yet, continuous operation of amenities like coffee machines and treadmills can cause needless energy usage and higher costs. To address this issue, an intelligent power management solution can be implemented using the Milesight WS523 Smart Socket. By integrating this smart socket into machines, employees can enjoy automated power control, leading to energy savings and increased efficiency.



Smart Waste Management

Several large garbage bins are positioned at the rear of the building to serve as the waste collection area for daily disposal needs.

Milesight deploys EM400-MUD Multi-Functional Ultrasonic Distance/Level Sensor to closely monitor the garbage bin fill levels, and waste collection companies can optimize their collection frequency based on real-time needs rather than adhering to a fixed schedule. This approach not only conserves time and resources, but also reduces the number of garbage trucks on the roads, ultimately leading to a decrease in carbon emissions with sustainable energy policies.



Water Efficiency

To decrease grassland of Milesight building irrigation water consumption, employing sprinklers instead of stationary or traveling guns can lead to a significant reduction in water usage. Moreover, to optimize the water use management, Milesight UC512 LoRaWAN® Solenoid Valve Controllers have been installed outdoors. They are utilized for enabling remote irrigation for the grass yard as well as setting water usage schedules at the dishwashing area of Milesight to prevent water theft. As a result, there was a 13% reduction in outdoor water usage.



Enhance Employee Comfort and Satisfaction



Indoor Air Quality

As mentioned earlier, maintaining a good level of indoor air quality significantly enhances HVAC efficiency. It is also crucial for employees to work in a conducive environment. Elevated carbon dioxide (CO₂) levels can lead to symptoms of Sick Building Syndrome (SBS), making the installation of Milesight AM Series IAQ Sensors in buildings essential.

Each meeting room and functional space is equipped with at least one sensor, allocated based on the area of the room. Additionally, in the open area workstations, sensors are installed for every few tens of square meters.



Smart Restroom

With Milesight Smart Restroom Solution that integrates advanced operational and environmental sensors and IoT technologies, the restroom can be upgraded to be smart enough to break through the limitations of traditional restrooms, thus enhancing occupants' comfort.



User-Friendly Automated Curtain Control

During the lunch break, employees usually take a nap and recharge. With the use of WS558 and UC100 LoRaWAN® Controller, the lights will automatically turn off, and curtains will close. As the break ends, a sequence of music will play, followed by opening the curtains and turning on the lights. This improves the waking up experience for employees. Curtains will also adapt based on the season and time. For example, in summer, if the sun shines directly into meeting rooms at 4 PM, the curtains will lower automatically to cool the space and save energy on air conditioning.



Easy Operation in Meeting Room

To elevate the meeting room using experience, the Milesight WS156 Smart Scene Panel is employed. It empowers occupants to preset 6 ambient scenes. A simple button press can trigger automatic activation of lights and air conditioning in the meeting room.

Revolutionizing Space Utilization

Employees Traffic Analysis

Utilizing the Milesight VS133 AI ToF People Counting Sensor provides insights into space capacity and usage patterns. This assists building managers in efficiently allocating resources for the lobby.

The AI 360°Panoramic Fisheye Camera's AI people flow analytic function enhances employees' traffic analysis during morning check-in, further improving efficiency. Real-time people flow statistics contribute to enhanced space utilization, energy efficiency, and business value.

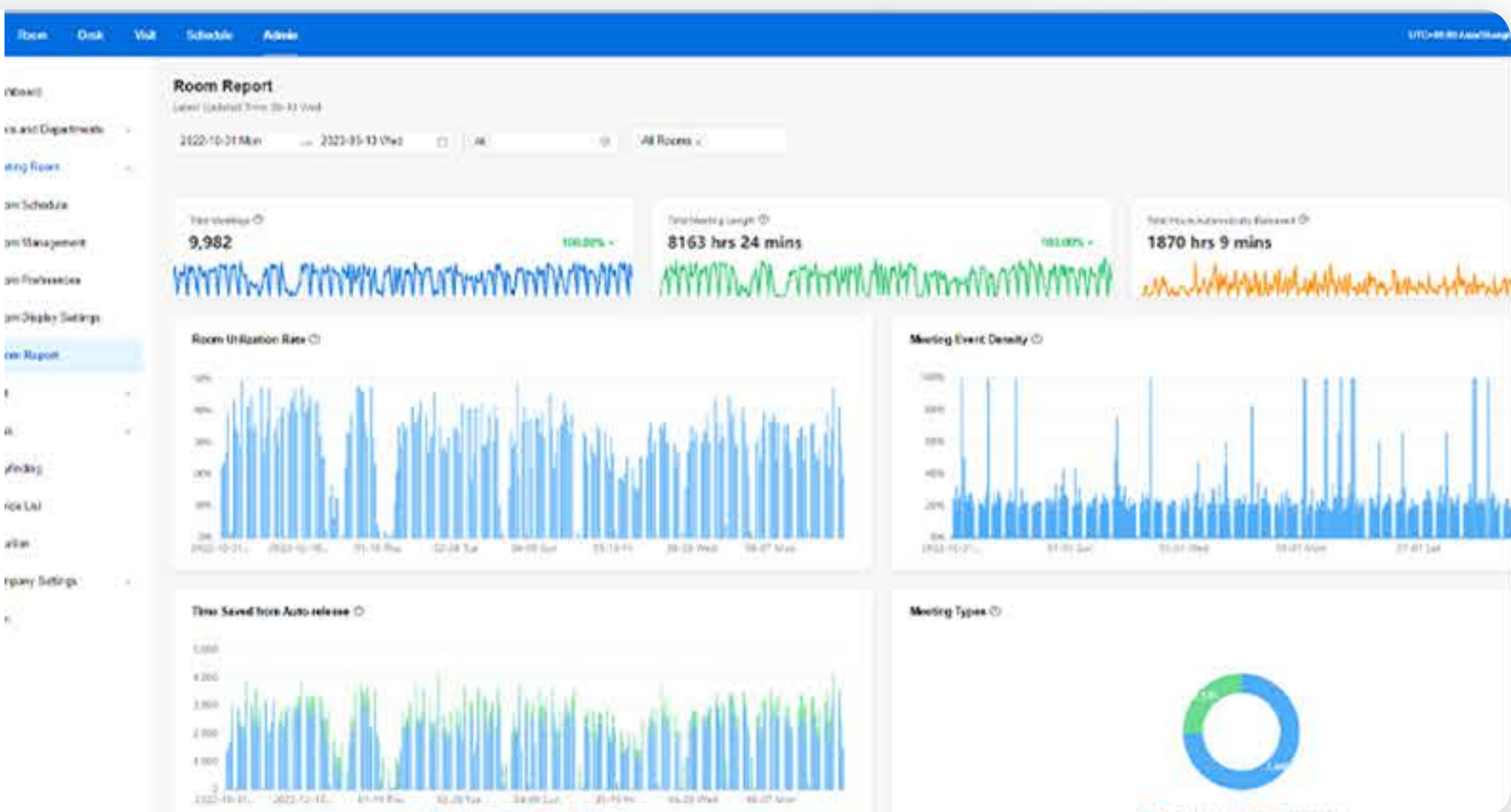


Meeting Room Utilization

VS121 AI Workplace Occupancy Sensors provide real-time data on whether a meeting room is occupied, vacant, or underutilized. As the picture below shows the web application, between 9 am and 6 pm, the meeting rooms exhibit substantial utilization, with the usage metric reaching 49.94%. This accurately reflects efficient occupancy and utilization of the spaces.

Integrating VS121 with room booking systems enables employees to check the availability of meeting rooms instantly.

If a booked meeting room remains unoccupied for a certain period (15 min set at Milesight), the VS121 occupancy sensor can trigger an alert and release the meeting room. This prevents rooms from being unnecessarily reserved but left unused.



Hot Desk Management

At Milesight, although most workstations are fixed, the VS341 Desk Occupancy Sensor serves the purpose of monitoring flexible hot desks and shared common workspace areas. With it placed underneath individual workstations, the VS341 collects occupancy data and wirelessly transmits it to the cloud. Any changes in desk occupancy status initiate communication between the VS341 and the DS3604 E-link IoT Display using Milesight D2D. Thus, the DS3604's occupancy status is swiftly updated within 1 second, delivering a clear signal regarding workstation availability.

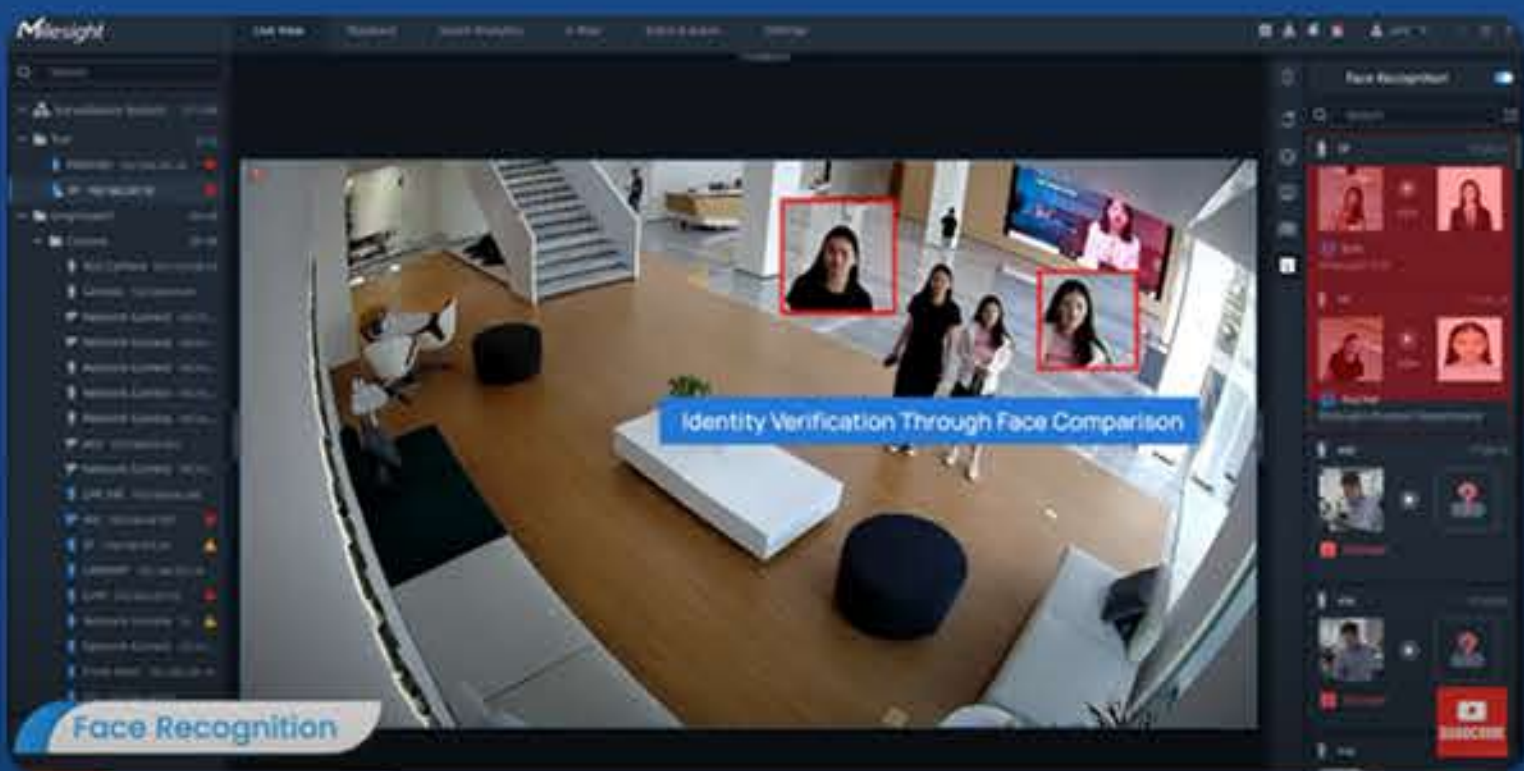


Parking Space Utilization

There is an underground parking facility in the Milesight building. To enhance parking space management, we have installed EM400-MUD Multifunctional Ultrasonic distance and level sensors. These sensors enable real-time monitoring of parking spot occupancy and availability, thereby reducing parking management costs and enhancing efficiency.

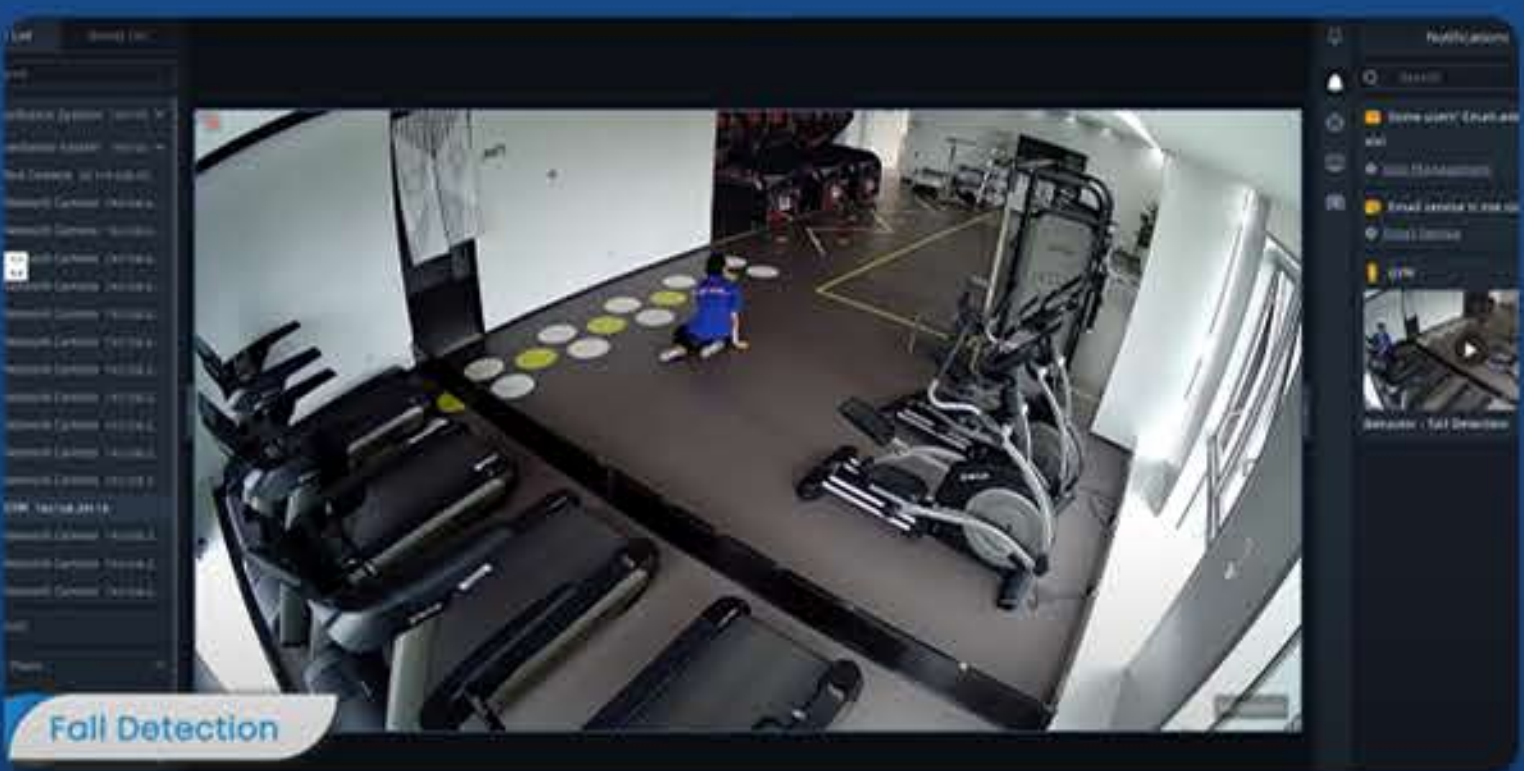


Building Security and Employee Safety: A Focus on Protection



Face-Human Recognition

Mileight's AI cameras ensure the security of the entire building, such as door control and monitoring. Mileight AI Box's Face-Human Recognition feature can not only identify individuals but also alarm personnel in critical situations.



Face-Human Recognition

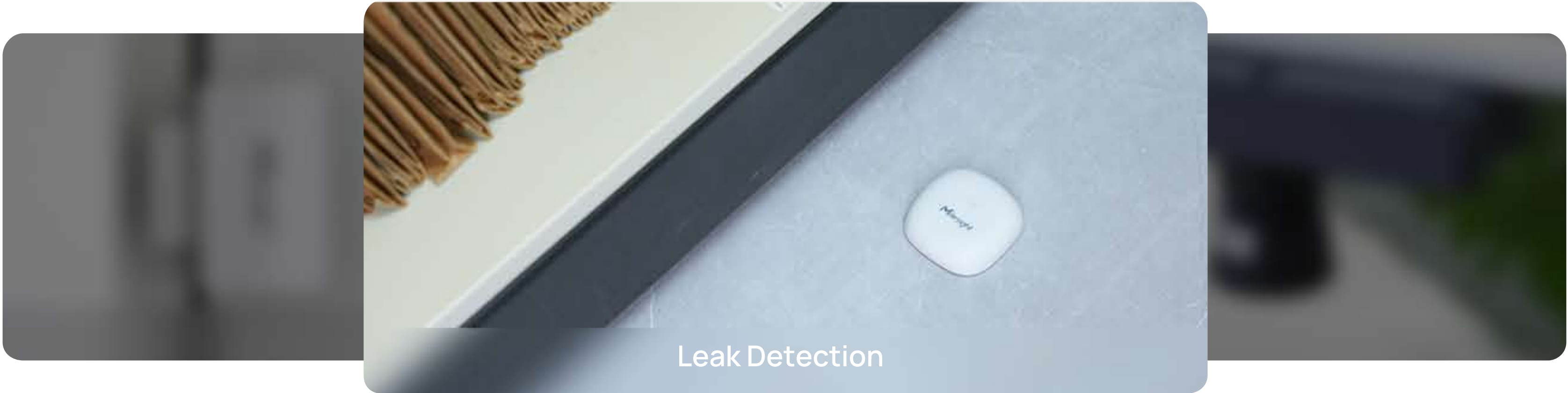
Ensuring Gym Safety for Employees To guarantee employee safety during gym activities, the gym incorporates an AI box for fall detection, instantly notifying pertinent personnel. Furthermore, in emergency situations, employees can activate the WS101 button, prompting an alert to be dispatched to the administration. Meanwhile, a direct link to a live camera feed facilitates ongoing monitoring of the gym's environment, enabling rapid response if needed.

Guarding Assets: Strategies for Assets Protection



Night Time Security

Since image testing outside the building is required at night, windows are left ajar for wiring. The testing room is on the first floor, which poses a security risk for potential break-ins after office hours. To address this, the WS301 LoRaWAN® Magnetic Contact Switch is installed on the testing room windows to detect any openings during the night.



Leak Detection

In the archive room and server room, water leak detection is essential. Mileight's WS303 Mini Leak Detection Sensors are strategically placed in the server room to monitor for any potential leaks or water-related incidents. Once a water leak is detected, it will alarm admins locally and remotely, thus minimizing downtime and mitigating risks associated with water-related incidents in server rooms.



Fish Pond Water Level Monitoring

The Mileight building boasts a diverse range of areas. On the rooftop, we have a green ecological corner with a fish pond. Using EM400-MUD, Multi-Functional Ultrasonic Distance/Level Sensor we monitor the water levels in the fish pond, ensuring optimal living conditions for every small inhabitant within the Mileight ecosystem.



AC Unit Cooling

Mileight Headquarters also comes with a rooftop where some of the events and parties are held. And the air conditioner unit is also placed on the rooftop. However, high outdoor temperatures during summer risk damaging the AC unit. Therefore, We use the EM300-TH temperature and humidity sensor to monitor outdoor temperature on the rooftop. If the temperature rises to a specific threshold, the EM300-TH triggers the UC512 Solenoid valve controller, activating water spraying. This cools the condenser units efficiently, boosting performance and maintaining optimal operation.

Enhancing ESG with Milesight Green Building

Milesight's smart green building serves as a symbol of innovation and a cornerstone for enhancing Environmental, Social, and Governance (ESG) aspects. The integration of cutting-edge technologies and sustainable practices within the headquarters reflects Milesight's commitment to promoting a more sustainable and responsible business ecosystem.



Environmental Impact

The Milesight Green Building emphasizes energy efficiency and sustainability, aligning with global environmental goals. By utilizing advanced technologies like LoRaWAN®, AI, and 5G, the building optimizes energy and water consumption, significantly reducing its carbon footprint. Real-time monitoring and intelligent systems ensure that resources are utilized efficiently, contributing to a greener environment.



Social Responsibility

Milesight's dedication to creating a smart and comfortable workspace for employees demonstrates their commitment to social responsibility. The focus on indoor air quality, occupant comfort, and smart restroom solutions enhances the overall well-being and satisfaction of the workforce. This approach fosters a conducive work environment that prioritizes the health and happiness of its employees.



Governance

Incorporating state-of-the-art security measures and advanced surveillance systems, Milesight showcases its dedication to robust corporate governance. The deployment of AI-powered cameras, face-human recognition, and comprehensive security protocols ensures the safety of employees and protects valuable assets. These initiatives underline Milesight's commitment to maintaining a secure and well-governed workplace.

Why Choose LoRaWAN®?

LoRaWAN® offers robust and low-power connectivity, enabling efficient communication for IoT devices. It extends coverage over large areas, conserves energy for long battery life, and supports various applications like smart cities, agriculture, and asset tracking. Its scalability and cost-effectiveness make it a versatile solution for diverse industries.



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